

# PROMOTING LITERACY & NUMERACY

THROUGH TEACHER EDUCATION

**SCoTENS**

THE STANDING CONFERENCE  
ON TEACHER EDUCATION,  
NORTH AND SOUTH



2011 Conference and Annual Reports  
Secretariat provided by The Centre for Cross Border Studies

## WEBSITE

<http://scotens.org>

## ACKNOWLEDGMENTS

The Committee of the Standing Conference on Teacher Education North and South (SCoTENS) wishes to acknowledge with thanks the financial support of:

The Department of Education and Science, Dublin,

The Department for Employment and Learning, Belfast,

The Department of Education, Bangor

The Standing Conference on Teacher Education,  
North and South (SCoTENS)

## PROMOTING LITERACY AND NUMERACY THROUGH TEACHER EDUCATION



*Delegates who attended the 2011 Annual SCoTENS Conference in Cavan*

### **2011 CONFERENCE AND ANNUAL REPORTS**

Secretariat provided and report published by  
THE CENTRE FOR CROSS BORDER STUDIES

ISBN No.978-1-906444-38-9



**The following institutions and organisations are fully paid up members of SCoTENS**

St Patrick's College, Drumcondra, Dublin  
St Mary's University College, Belfast  
Stranmillis University College, Belfast  
Mary Immaculate College, Limerick  
St Angela's College, Sligo  
Church of Ireland College of Education, Dublin  
Marino Institute of Education, Dublin  
Mater Dei Institute of Education, Dublin  
Froebel College of Education, Blackrock, Co. Dublin  
Queen's University Belfast  
University of Ulster  
Dublin City University  
University College Dublin  
Trinity College Dublin  
National University of Ireland Galway  
National University of Ireland Maynooth  
University of Limerick  
University College Cork  
Waterford Institute of Technology  
National College of Art and Design  
Hibernia College  
Irish Federation of University Teachers  
Irish National Teachers Organisation  
Association of Secondary Teachers in Ireland  
Teachers Union of Ireland  
Northern Ireland Council for the Curriculum, Examinations and Assessment  
National Council for Curriculum and Assessment  
The Teaching Council (Ireland)  
General Teaching Council for Northern Ireland  
Regional Training Unit Belfast  
Donegal Education Centre  
Drumcondra Education Centre  
Kildare Education Centre  
Monaghan Education Centre  
Tarbert Education Centre  
Middletown Centre for Autism

## CONTENTS

### **CHAIRPERSONS INTRODUCTION 05**

Professor Teresa O'Doherty

Dr Tom Hesketh

### **ANNUAL CONFERENCE REPORT 07**

Promoting Literacy and Numeracy through Teacher Education

### **RESEARCH AND CONFERENCE PROJECTS – EXECUTIVE SUMMARIES 103**

#### **Funded or co-funded by SCoTENS 2009-2011**

Effective mentoring within Physical Education teacher education 104

An evaluation of the implementation of Realistic Mathematics Education (RME) in Primary Schools in the North and South of Ireland 106

Doctoral Research in Education - links, challenges and opportunities 108

Images and Identity: a collaborative art and design citizenship education project 110

Directors of Teaching Practice research group: Continuing Professional Development for teaching practice supervisors 113

Exploring Japanese Lesson Study as a model of peer to peer professional learning 116

Understanding the potential for research capacity building in initial teacher education programmes, North and South. A baseline comparative study: phase 1 118

Children exposed to Domestic Abuse: helping student teachers understand their role in a primary school setting 120

#### **RESEARCH, CONFERENCE AND EXCHANGE PROJECTS – INTERIM REPORTS 123**

#### **Funded or co-funded by SCoTENS 2011-2012**

8th North-South Student Teacher Exchange Project 124

Exploring and developing spaces among adult education practitioners for online and arts based reflection 127

Assessment in teacher education North and South (ATENS) 134

An exploration of mathematical identity using narrative as a tool (MINT) 136

Science enhancement and learning through exchange and collaboration among teachers (SELECT) 138

A critical analysis of North-South educational partnerships in development contexts 145



Teachers' views on the factors influencing their professional development: perceptions, experiences and motivation	146
Teaching controversial history: a symposium on the teaching of 1916 and the battle of the Somme	147
Spiritual education: new challenge, new opportunity	150
Writing as a professional development activity in initial teacher education	153
<b>NEW RESEARCH AND CONFERENCE PROJECTS Funded or co-funded by SCoTENS 2012-2013</b>	<b>157</b>
<b>SUMMARY OF SCoTENS RESEARCH PROJECTS, CONFERENCES AND PUBLICATIONS 2003-2013</b>	<b>163</b>
<b>FINANCIAL REPORT</b>	<b>179</b>

## Members of the SCoTENS Committee

Dr Tom Hesketh (co-chair)	Director, Regional Training Unit, Belfast
Professor Teresa O'Doherty (co-chair)	Head of Education, Mary Immaculate College, Limerick
Dr Linda Clarke	University of Ulster
Professor Kathy Hall	University College Cork
Professor Anne O'Gara	Marino Institute of Education, Dublin
Dr Noel Purdy	Stranmillis University College, Belfast
Dr Geraldine Magennis	St Mary's University College, Belfast
Dr Aidan Mulkeen	NUI Maynooth
Mr Eugene Toolan	St Angela's College, Sligo
Dr Billy McClune	Queen's University Belfast
Professor Marie Parker Jenkins	University of Limerick
Ms Deirbhile Nic Craith	Irish National Teachers Organisation
Mr Tomás Ó Ruairc	The Teaching Council (Ireland)
Mr Barney Ball	General Teaching Council for Northern Ireland
Mr Andy Pollak	Centre for Cross Border Studies
Administrator:	Ms Patricia McAllister Centre for Cross Border Studies
Journal editors:	Ms Patricia McAllister Mr Andy Pollak Centre for Cross Border Studies

# PROMOTING LITERACY & NUMERACY

THROUGH TEACHER EDUCATION





## Chairpersons' Introduction

Welcome to the 2011 annual report of SCoTENS (the Standing Conference on Teacher Education, North and South). This report incorporates the proceedings of our ninth annual conference as well as a financial statement and reports on the other conferences, exchange networks and research activities supported by SCoTENS. Together they provide evidence of the significant and impactful progress of our various activities during the year under review.



The annual SCoTENS conference provides a forum where teacher educators across the island of Ireland can engage in open, critical and constructive analysis of current issues in education with a view to promoting a collaborative response to these issues. In addition, SCoTENS promotes and funds a range of research-based initiatives with a view to establishing sustainable North-South partnerships and projects.

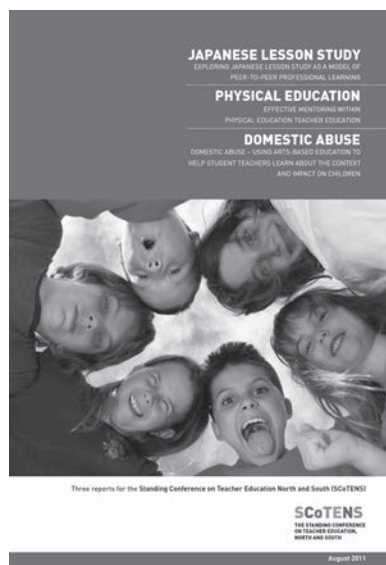
Our ninth annual conference, held in Cavan in September 2011, and entitled 'Promoting Literacy and Numeracy through Teacher Education' was a response to the publication of *Count, Read: Succeed – A strategy for improving outcomes in Literacy and Numeracy*, which was launched by the Northern Ireland Minister for Education, Caitríona Ruane, in March 2011 and the *Literacy and Numeracy for Learning and Life: The National Strategy to Improve Literacy and Numeracy Among Children and Young People 2011-2020*, which was launched by the Minister for Education and Skills, Ruairí Quinn, in July 2011. Both these strategies, while outlining very clearly the reforms required of the respective systems to improve standards in literacy and numeracy, were premised on the philosophy that all young people need to develop their skills of literacy and numeracy so as to participate fully in the education system, live satisfying and rewarding lives, and to participate as active and informed citizens.

Interest in these policies, and more particularly, interest in how teacher education could contribute to the promotion of literacy and numeracy, ensured that the conference was extremely well attended. Both Irish Minister of State at the Department of Education and Skills, Ciaran Cannon, and La'Verne Montgomery, a senior official of the Department of Education Northern Ireland (who delivered Minister for Education John O'Dowd's speech), emphasised the centrality of raising the educational attainment of all children in schools. In officially opening the conference proceedings, both speakers voiced the commitment of their respective departments to tackling the issues of inequality and social injustice in schools. Both speeches underlined the centrality of addressing low levels of literacy and numeracy as a way of breaking the cycle of poverty and exclusion from society.

These opening statements found powerful resonance in the contributions of Dr Harold Hislop, Chief Inspector, Department of Education and Skills, and Sir Bob Salisbury, Chair of the Northern Ireland Literacy and Numeracy Taskforce. While both referenced the performance of Irish children in recent PISA studies and the need for systemic reform, it was evident that neither speaker was seeking a 'back-to-basics' approach to literacy and numeracy. Rather, they underscored the importance of a broad and modern understanding of standards and advocated that reforms in the teaching of literacy and numeracy be research-driven.



Professor Jackie Marsh and Professor John O'Donoghue, while acknowledging the economic and policy pressure for reform in literacy and numeracy, provided discerning and thought-provoking explorations of the nature of literacy and numeracy in modern society. Professor Terezinha Nunes, Professor of Educational Studies at University of Oxford, in her keynote address on day two of the conference, addressed the complexity of teacher knowledge required to teach English literacy. Professor Nunes gave an overview of the importance of morphemes (units of meaning that form words) in children's learning of how to read and write both familiar and novel words. Describing intervention programmes which she had directed, Professor Nunes illustrated how expert teachers can enrich children's vocabulary and enhance their fluency in reading and writing.



Reflecting the nature and quality of the many projects being supported by SCoTENS, parallel workshop sessions provided an opportunity for researchers to illustrate the richness of projects and programmes being designed and implemented in both jurisdictions. In addition, the conference provided an opportunity to launch a number of reports: *Teacher Education for Inclusion*, the 2010 SCoTENS annual report; *Primary School Teachers' experiences of Teaching Healthy Eating within the curriculum*, by Elaine Mooney, Eileen Kelly-Blakeney, Amanda McCloat and Dorothy Black; and *Disablist Bullying: An Investigation of Student Teachers' Knowledge and Confidence* by Noel Purdy and Conor McGuckin.

The latter two projects are just two of the many research projects typified by scholarship and North-South collaboration completed during 2010-2011 with the assistance of SCoTENS' funding. SCoTENS itself is funded by the Departments of Education, North and South, and through the subscriptions of our affiliated institutions and organisations. We are indebted to the generosity of these departments and organisations for their commitment to supporting the work of cross-border projects and research in the teacher education sector. Their continued support is essential for the maintenance and development of this vital and trail-blazing North-South forum.

As well as acknowledging the support of our sponsors, we would like to express our gratitude and appreciation to the staff of the Centre for Cross Border Studies who provide administrative support for SCoTENS, especially Patricia McAllister and Andy Pollak for their generous, unstinting and professional support. We would also like to thank the management and staff of the Radisson Blu Farnham Estate Hotel, Cavan, who provided a most welcoming venue for our conference. Finally we thank our fellow members of the SCoTENS committee who give generously both of their expertise and time.

*Teresa O'Doherty*

Teresa O'Doherty  
Co-Chair

*Tom Hesketh*

Tom Hesketh  
Co-Chair

# Promoting Literacy and Numeracy through Teacher Education



## Annual Conference

The Radisson Blu Farnham Estate Hotel, Cavan  
29 – 30 September 2011





*Pictured at the 2011 Annual SCoTENS Conference: From left to right: Sir Bob Salisbury, Dr Tom Hesketh, Ms La'Verne Montgomery, Mr Ciaran Cannon TD, Professor Teresa O'Doherty and Dr Harold Hislop*

## Conference Reports – Contents

Opening Address: <b>Mr Ciaran Cannon TD</b> Minister of State for Training and Skills, Department of Education and Skills, Dublin	11
Opening Address: <b>Ms La'Verne Montgomery</b> (on behalf of <b>Mr John O'Dowd MLA</b> , Minister for Education, N. Ireland)	14
TEACHER EDUCATION AND IRELAND'S NATIONAL STRATEGY TO IMPROVE LITERACY AND NUMERACY <b>Dr Harold Hislop</b> , Chief Inspector, Department of Education and Skills, Dublin	17
THE NORTHERN IRELAND LITERACY AND NUMERACY TASK FORCE <b>Sir Bob Salisbury</b> , Chair, Northern Ireland Literacy and Numeracy Task Force	24
LITERACY AND NUMERACY – BEYOND DEFINITIONS? <b>Professor Jackie Marsh</b> , Professor of Education, University of Sheffield <b>Professor John O'Donoghue</b> , University of Limerick	32
PARALLEL WORKSHOPS – TEACHER EDUCATOR PERSPECTIVES	48
<b>Workshop 1. Literacy:</b> facilitated by <b>Dr Eithne Kennedy</b> , St Patrick's College, Drumcondra and <b>Ms Deirdre Robson</b> , St Mary's University College, Belfast	48
<b>Workshop 2. Numeracy:</b> facilitated by <b>Dr Sean Delaney</b> , Marino Institute of Education, Dublin	53
<b>Workshop 3. Literacy:</b> facilitated by <b>Ms Michele Long</b> , University of Ulster and <b>Dr Brian Murphy</b> , University College Cork	57



<b>Workshop 4. Numeracy:</b> facilitated by <b>Dr Aisling Leavy</b> , Mary Immaculate College, Limerick and <b>Mr Jim Mullan</b> , Queen's University Belfast	58
WHY TEACHERS MUST KNOW MORE THAN PHONICS TO TEACH ENGLISH LITERACY <b>Professor Terezinha Nunes</b> , Professor of Educational Studies, University of Oxford	59
LITERACY AND NUMERACY PROJECTS NORTH AND SOUTH DEIS PROJECT <b>Ms Ciara O'Donnell</b> , Professional Development Service for Teachers (PDST) and <b>Mrs Mary Irving</b> , St Catherine's Infant School, Cabra, Dublin	75
ACHIEVING BELFAST <b>Mr Paul Lawther</b> , Assistant Senior Education Officer, Belfast Education and Library Board	80
BRIGHT FUTURES (DERRY) <b>Mr Paddy Mackey</b> , Senior Education Officer, Western Education and Library Board	83
JAPANESE LESSON STUDY (Loreto Convent, Cavan and St Louise's Comprehensive College, Belfast) <b>Professor John Gardner</b> , Queen's University Belfast and <b>Dr Mary Magee</b> , St Angela's College, Sligo	85
NEW RESOURCES FOR SPECIAL EDUCATIONAL NEEDS ON THE SCoTENS WEBSITE <b>Dr Noel Purdy</b> , Stranmillis University College, Belfast	92



## DAY ONE

### OPENING ADDRESS (1)

**Mr Ciaran Cannon TD**

**Minister of State for Training and Skills**



A dhaoine uaisle go léir. Tá fíor áthas orm bheith anseo i bhur measc inniu, agus fáilte ó chroí a chur roimh gach éinne go Contae an Chabháin.

La'Verne Montgomery, members of the SCoTENS committee and secretariat, distinguished guests and friends in education, it is a great privilege for me to speak at the opening of this, the ninth annual conference of the Standing Committee on Teacher Education, North and South, and to welcome everyone to the beautiful Lake County today.

The work of SCoTENS is a most important bridge between those involved in teacher education, North and South. By bringing together approximately forty educational entities, you have the ability to make an enormous contribution to learning and teaching on the island. I am keenly aware that SCoTENS has supported 71 educational projects since its inception, across a very broad range of teacher education topics, and that there have been 17 significant reports published in that same short timeframe.

Consistently, the work of SCoTENS has sought to meet contemporary challenges. Last year's conference's emphasis on 'Teacher Education for Inclusion' was a perfect example of SCoTENS keeping pace with current needs in education. I applaud the report of that conference, which will be launched today. I commend also the focus of previous annual conferences, on teacher education and leadership, special education and citizenship, among other areas.

The quality of our education systems, North and South, has been rightly acknowledged internationally for many years. Both our systems continue to enjoy strong public confidence and on many indicators they continue to perform well.

However, it is clear to our government in the South that we cannot be complacent about standards and the learning achieved by students. A major issue facing both of our systems, North and South, is the need to improve standards in literacy and numeracy.

Your conference theme for this year is, therefore, very timely. I note that the topics you will discuss range from matters of definition – and these are never straightforward when we speak of literacy and numeracy – through to teacher education projects, case studies and comparative studies. I am delighted to see, within these topics, that we are also seeking to learn from best practice abroad, as well as examining progress made in existing initiatives like DEIS in the South, Achieving Belfast and Achieving Derry - Bright Futures in the North. All of these are initiatives which focus on targeting supports at the most disadvantaged children in our societies.

We are keenly aware that deficits in basic learning are some of the most potent reinforcers of disadvantage that exist. Indeed, such deficits encompass the very broadest definitions of disadvantage and impoverishment. The words of UNESCO are appropriate here: "those



who use literacy take it for granted – but those who cannot use it are excluded from much communication in today's world. Indeed, it is the excluded who can best appreciate the notion of 'literacy as freedom'<sup>1</sup>.

Basic literacy and numeracy skills are still the most vital links to educational progress that we can give to our children, or indeed to the adult learners whom our educational systems did not adequately support in their school days. As Minister of State with responsibility for training and skills, I am convinced that we simply must ensure that all students develop these core capabilities – and I would add skills and understanding in the sciences also. Without these skills, our young people cannot benefit from further educational opportunities nor can they take up meaningful and fulfilling work and social experiences in adult life.

I know that this conviction about the importance of literacy and numeracy is shared by the Governments and communities in Ireland North and South. In Northern Ireland Minister O'Dowd's predecessor at the Department of Education developed and published earlier this year *Count, Read: Succeed* – a strategy document on promoting literacy and numeracy in schools. My Government colleague, Minister Ruairí Quinn, published *Literacy and Numeracy for Learning and Life* – a national strategy to improve literacy and numeracy in the South – in July of this year. Both documents were shaped by public consultations; both underline the importance of literacy and numeracy skills for our young people. And both documents show that we face common challenges in implementing the changes that are necessary in our education systems to realise the goals that these strategies set before us.

I am delighted, therefore, that you will be hearing in more detail about these strategies from Sir Bob Sainsbury, the chairperson of the Northern Ireland Literacy and Numeracy Task Force and from Dr Harold Hislop, Chief Inspector at the Department of Education and Skills in Dublin.

Both strategies acknowledge that literacy and numeracy can only be improved by a range of coordinated actions in areas such as teacher education, curriculum change, assessment, targeted supports for those with special needs and wider community supports. For you at this conference, the role that teacher education can play must be your main concern.

Both strategies emphasise that the quality of teaching is a key component in achieving effective learning in schools. Both our education systems have benefited over the years from the skill, dedication and commitment of highly professional teaching workforces. As our strategy documents make clear, we have to ensure that the teachers of today and those that will work in our schools in the years to come continue to have the skills, knowledge and resources they need to provide world-class teaching and learning experiences to our young people.

This will be an enormous challenge, especially as both our governments face considerable financial challenges. I hope that your deliberations here in Cavan will make a tangible contribution to advancing the implementation of the strategies and to improving literacy and numeracy standards among all our young people.

<sup>1</sup> UNESCO statement for United Nations Literacy Decade 2003-2012



A recent report from the Carnegie Corporation noted that “young people who do not have the ability to transform thoughts, experiences, and ideas into written words are in danger of losing touch with the joy of inquiry, the sense of intellectual curiosity, and the inestimable satisfaction of acquiring wisdom that are the touchstones of humanity”<sup>2</sup>.

It is difficult to disagree with such sentiments. I cannot state strongly enough that these fundamental skills are the bridges to learning, to social responsibility and cohesion, to mutual understanding. It is not unreasonable to suggest that the SCoTENS conference this year could not have had a more important theme.

Finally, I thank the committee members, and specifically your co-chairpersons, Dr Tom Hesketh, Director of the Regional Training Unit in Belfast and Professor Teresa O’Doherty, Head of Education at Mary Immaculate College, Limerick, for your excellent work and for the invitation to be here today.

I also thank the staff at the Centre for Cross Border Studies, in particular Patricia McAllister and Andy Pollak, for their great administrative and professional work in support of SCoTENS.

I wish you the very best in your important work over the next two days and I and my colleagues at the Department of Education and Skills look forward to receiving the outcomes of your deliberations in the near future.

Go raibh maith agaibh.

*2 Graham, S. and Perin, D (2007). Writing Next: Effective Strategies to Improve Writing of Adolescents in Middle and High School: A Report to the Carnegie Corporation of New York. Washington, DC, Alliance for Excellent Education*



## OPENING ADDRESS (2)

**Ms La'Verne Montgomery**  
**Director, Education Workforce Development**  
**Directorate, Department of Education**



Good morning everyone. I am delighted to be able to join you here today and to jointly open the ninth annual SCOTENS conference. I would like to add my words of welcome to those of Minister Cannon.

As you are aware, John O'Dowd had hoped to attend this morning. Regretfully, due to his increased responsibilities, he has been unable to make it. He has however asked me to extend his apologies and to pass on his best wishes for a successful conference.

Before I go any further, on behalf of the Minister, I would like to thank the Centre for Cross Border Studies for all its hard work in organising the conference and for putting together a programme which addresses many of the issues currently challenging our education systems North and South.

The focus of this conference on 'promoting literacy and numeracy through teacher education' is particularly welcomed by the Department of Education.

Though, of course, it goes much wider than that. We need to promote literacy and numeracy at all levels of our society. A good education is something we all should value, promote and aspire to. Schools and teachers can have a huge and positive influence, but they can't do it alone. We need to engage the powerful influence that parents have on their children.

I am pleased to see Sir Bob Salisbury and other members of the Literacy and Numeracy Taskforce here – I know it is an issue they are passionate about. If we get that strong relationship between teacher, school leader and parent, all working in the interests of the child, the child will succeed.

Earlier this week John O'Dowd made a statement to the Assembly, setting out his plans for education in the North. The aim is simple: to improve educational outcomes for all our young people. Achieving that aim is not without its challenges, but the Department has the right policies in place; the task now is to implement them.

The Department's policies on school improvement, the curriculum and assessment, early years, special education, the end of selection, and now *Count, Read: Succeed*, are all geared towards raising standards in literacy and numeracy. Minister Cannon has highlighted how vital literacy and numeracy are to the life chances of the individual and the development of our economy. Yet we are aware too many young people leave school without the qualifications they need, and PISA reminds us that in literacy and numeracy we are average by OECD standards.

In both North and South, the Departments have responded with literacy and numeracy strategies. The strategies have been designed to meet our own circumstances and challenges. But they have the same key themes – high expectations; good leadership; engaging with

parents; a modern curriculum; better use of data; and crucially, the central role of the class teacher.

When people talk about literacy and numeracy, they often say, 'option x works – do option x, then you'll raise standards'. Option x is made out to be the ideal solution to our literacy or numeracy problems. But if there was a quick fix solution, we'd be doing it by now.

The Department's 'option x' is not trendy and it's not quick, but it is simple: it's high quality teaching for every pupil, in every classroom, in every school. That's how we aim to raise standards. That's how our best teachers and schools are already raising standards.

A good teacher knows the pupils in their class. They know their strengths and the things they struggle with; they know the potential in each child and what type of learners they are. They respond with interesting lesson plans and a suitable mix of teaching strategies. The pupils enjoy what they are learning, and go on to achieve to their full potential.

We aim to raise standards through high quality teaching. We get high quality teaching when we get the right people to be teachers, and when teachers get the high quality support they need. A good teacher doesn't happen by accident – that's where teacher educators come in.

It's your job to equip our teachers with the subject knowledge, teaching skills and confidence they need to do their job effectively. It's your job to encourage them to be reflective professionals, always seeking to develop their knowledge and pedagogy, to learn from and share best practice, and to do their best for the pupils in their care.

There are many world-class teachers right across this island. We have excellent student and newly qualified teachers. We have some world-class research and practice in teacher education. That reflects well on the work of everyone in teacher education. And it will help us raise literacy and numeracy standards now and into the future.

The Department recognises the important work you are doing - providing high quality training for our teachers; undertaking research and development; and examining international best practice. Indeed, the Department would encourage you to get out into our schools regularly and look at what our best teachers are doing. Most of all, share the best practice so that it becomes common practice.

Remember that every teacher is a teacher of literacy and numeracy: the class teacher in the primary school; the English and Maths teachers in the post-primary school. Don't forget the influence of the History teacher, the Geography teacher, the Science teacher, whoever it is, through the example they set and the standards they expect. Literacy and numeracy underpin the entire school curriculum. So teacher education should focus on preparing all our teachers to teach literacy and numeracy to the highest possible standards.

SCoTENS has responded to that challenge in this year's conference. It's a full and interesting programme and I hope you enjoy it and get a lot out of it. The conference also represents an excellent opportunity to build up professional networks and to use them to support the teaching profession in working to raise literacy and numeracy standards for children right across this island.



On behalf of the Department, I would like to end by expressing my gratitude to all involved with SCoTENS, in particular the co-chairs Professor Teresa Doherty and Dr Tom Hesketh, for allowing me to jointly open the Conference in place of the Minister.

I hope that over the next two days you have a very interesting and valuable conference and that you will enjoy the debates, and that we will all learn much from each other on how crucially important it is to promote literacy and numeracy within teacher education.

## TEACHER EDUCATION AND IRELAND'S NATIONAL STRATEGY TO IMPROVE LITERACY AND NUMERACY

**Dr Harold Hislop**  
**Chief Inspector, Department of Education  
and Skills, Dublin**



Minister and friends: I am delighted to be here today and honoured by your invitation to speak at this SCoTENS annual conference. As Minister Cannon remarked, you could hardly have chosen a more apt, nor a more strategically relevant, theme for your conference.

Educational policy and the provision of education have always been a matter of central importance for Irish people and at times a matter of some controversy. A former owner of this house, the 5th Lord Farnham, was a key protagonist in the evangelical Second Reformation and the associated bitter national controversies about Irish educational policy in the early nineteenth century. Those controversies centred on whether all Irish people would have access to a genuinely acceptable elementary education and whether education could or should be used for utilitarian, social or sectarian, denominational religious purposes.

We have come a long way since the 1820s and sectarian disputes of the sort in which Lord Farnham took part are thankfully long in the past. Yet, whatever the causes and contexts of those emotive arguments, they remain as evidence of the power that is inherent in literacy and numeracy. So the historian in me cannot help but feel that it is somehow appropriate that SCoTENS, which has done so much to build practical cooperation between educational communities North and South, should meet here. And I am genuinely honoured by the opportunity to be part of your conversation about how we can improve literacy and numeracy for all young people.

Improving the quality of teaching and teachers' ability to use all available approaches to encourage and monitor learning are perhaps the policy initiatives that are most likely to lead to significant gains in school performance and pupils' achievement. This conference provides a valuable opportunity to reflect on how teacher education can contribute to improving the teaching and learning of literacy and numeracy.

Your committee asked Sir Bob Salisbury and me to speak about the Literacy and Numeracy Strategies that have been developed in our respective jurisdictions, North and South. We hope to outline some of the concerns that the strategies are designed to address and some of the challenges that face us in implementation. *Literacy and Numeracy for Learning and Life* was published by Minister Ruairí Quinn in July of this year, following an intensive public consultation process and considerable development work between the Department of Education and Skills, the Department of Children and Youth Affairs and a number of agencies including the Republic's Teaching Council, its National Council for Curriculum and Assessment and the Educational Research Centre at St Patrick's College Drumcondra in Dublin. The document sets out a ten-year Strategy up to 2020 and it is perhaps the first educational policy document in the Republic to set out an integrated approach to improving



standards across all the phases of education from early childhood to the end of the post-primary cycle, as well as addressing curricular design and related teacher education issues.

Time this morning does not permit us to examine all of the areas of the Strategy in detail. Instead, I thought it might be useful to examine these issues and, in particular, to concentrate on themes that may be of immediate relevance to your own conference.

Many aspects of the Irish educational system have served us well to date. Traditionally, Irish people have had a deep commitment to learning which has ensured that their children achieved high standards in our schools. Our very high school completion rates (at over 90%), the high proportion of students who go on to third level (approaching 70%) and the success of our graduates at home and abroad – all these indicators demonstrate that our educational system compares favourably with educational systems in other developed countries. For some time, however, we have had concerns about the quality of teaching of literacy and numeracy in our schools and the learning outcomes that are achieved by our learners. For example, many pupils at primary level continue to experience difficulties in the development of problem-solving skills. National Assessments suggest that at primary level, there has not been an improvement in standards in Mathematics in the past decade and in English reading in the past twenty years, despite the introduction of a revised curriculum and significantly increased resource provision such as additional mainstream teachers and special educational needs personnel. At post-primary level, we continue to grapple with the challenge of increasing the proportion of students who are studying Mathematics at higher level for the State Examinations. Just over 15% of students took the Higher Level Paper in Mathematics for the Leaving Certificate in June this year.

The results of the OECD's PISA 2009 tests were a shock for the Irish educational system. The decline in the reading and Mathematics scores of students in Ireland compared to previous PISA tests was unexpected. We were very disappointed to move dramatically from being positioned among the above average performing countries to among the average performing countries in reading, and from among the average performing countries to among the below average performing countries in Mathematics. Indeed, it is sobering to reflect on the fact that PISA suggests that 17% of all fifteen years olds and almost one in four teenage boys lack the literacy skills to function effectively in today's society.

A number of population factors, such as higher numbers of SEN students in mainstream classes and students learning English as a second or additional language, go some way to explaining some part of these declines. Our performance in the digital literacy test gave us some solace; our students performed better on this test than they did in the pencil-and-paper test, with the average score of students significantly above the OECD average. Yet this digital literacy performance lagged behind our performance in conventional reading in 2000. Independent international investigations of the Irish outcomes in PISA 2009 have shown that the degree of decline in the Irish maths and reading scores is almost certainly exaggerated by fundamental weaknesses in the underlying methodology used in the calculations of trends in PISA. However, let me be perfectly clear: the PISA data show that the performance of Irish students in the reading and maths tests has declined in the decade since 2000.

Inevitably, of all the context factors that I have mentioned, it is PISA that has attracted most coverage in the media. It is also probably frustrating for many educationalists that that media coverage, which is often simplistic and repetitive, ignores many of the complexities

and limitations in the PISA data. We could be disheartened by this – and I have some sympathy with that view – but ultimately railing against poorly informed comment is likely to be counter-productive. I prefer to grasp the opportunities that this media attention has brought to the public discourse on the quality of our educational system. Many academic evaluations, inspectorate reports and national assessments which pointed out weaknesses in our educational system did not receive the same level of attention.

In 2010 we had a unique opportunity to galvanise the political and educational systems and the wider public into tackling longstanding issues and challenges in Irish education. The formulation of the Literacy and Numeracy Strategy was designed to harness this energy for the long-term improvement of the educational system.

In November 2010 the Department of Education and Skills launched a national consultation on a literacy and numeracy strategy. The response was overwhelming: almost 480 detailed written submissions and a number of oral submissions were received. Representatives of over 60 organisations took part in face-to-face focus group meetings. Several journals carried articles on the process. The extent of the response demonstrated the genuine interest that people within and beyond the educational system had for this issue. A number of themes emerged strongly in the consultations. Clear support emerged for:

- A renewed emphasis on literacy and numeracy in the educational system
  - The importance of literacy and numeracy for an individual's personal development, life chances and prosperity
  - Ensuring that effective learning of literacy and numeracy make a major contribution to equity and social justice in Irish society
  - A clear need to improve literacy and numeracy standards
  - A comprehensive approach from early childhood education to the end of schooling
  - Making improvements through a broad range of measures in an integrated way
  - Setting clearly defined targets and identification of definitive actions
  - We therefore sought to address our concerns about standards by putting in place a framework that would support the seamless development of literacy and numeracy from early childhood to adulthood. The National Literacy and Numeracy Strategy does this through three key features:
- setting out measurable targets for improving literacy and numeracy in the period 2011-2020
  - identifying six areas for action that provide a comprehensive and integrated framework for developing literacy and numeracy at all stages of education and
  - within these six areas, identifying specific actions with timeframes attached.

There is no doubt that the targets in the Strategy are ambitious. Nonetheless, I believe that they are realistic and provide a key focus for moving forward as well as a reference point for monitoring progress. For example, the Strategy commits us to decreasing the percentage of learners performing at the lowest and increasing those at the highest bands in national and international assessments of reading and mathematics by at least 5 percentage points. The Strategy also commits us to raising public awareness of the importance of oral and written language and promoting better attitudes to Mathematics among children and young people.





The six areas for action in the Strategy reflect the main drivers of educational success as identified in research. These are:

### Outline

- Context issues in the development of the Strategy
- Key features
- Targets in the strategy
- Areas for action
- Defining literacy and numeracy
- Improving the professional practice of teachers and pre-school staff

You will note the inclusion of teachers' professional skills as a key area for action. Indeed, teachers and practitioners in early childhood and care education settings are the most powerful resource that we have within the educational system. We are well aware that recruiting the most able students to become teachers, and providing high-quality initial and continuing professional development for teachers throughout their careers, make a very substantial difference to the quality of students' learning.

However, the strategy acknowledges that while teacher competence is undoubtedly a crucial determinant of quality, it must be complemented by other drivers such as harnessing the support of parents, the primary educators of their children; building the capacity of school leaders to create a climate conducive to improvement; ensuring that the content of the curriculum is amenable to implementation; and developing a culture of improvement in schools through improving assessment and evaluation approaches.

Can I turn to the definitions that we adopt for literacy and numeracy? Many of the submissions made to us stressed the need for us to adopt a comprehensive definition of literacy embracing all forms of written and oral communication and one for numeracy that stressed the ability to apply mathematical ideas in everyday life. Commentators, fearful no doubt of a reductionist approach centred on the traditional 3Rs, emphasised the importance of a broader understanding of these skills being adopted consistently.

The Strategy seeks to allay those understandable fears about a narrowing of the curriculum. In the Strategy, we define literacy as "the capacity to read, understand and critically appreciate various forms of communication including spoken language, printed text, broadcast media and digital media". This definition includes not just reading, but the skills of speaking and listening as well as communication, using not only traditional writing and print but also digital media. Rather than the traditional understanding of numeracy as an ability in number skills, the definition of numeracy in the Strategy prioritises the use of mathematical understanding and skills to solve problems and meet the demands of day-to-day living. The title of the Strategy itself, *Literacy and Numeracy for **Learning and Life*** is also apt. It reflects the fact that literacy and numeracy are not just important in their own right, but help to equip children and young people with the skills and attitudes that will prepare them to meet the demands of the modern world in their personal lives, in their current and future learning, and in the workplace. I am very much looking forward to hearing Professor Marsh



and Professor O'Donoghue discuss these issues of definition in the next session of this conference.

I'd like to turn now to the area of teachers' professional development. I have already said that the quality of teaching in pre-schools and schools is a key determinant in successful literacy and numeracy learning. And I think it is important that we recognise the significant strengths that we have in our teaching profession. While other countries have faced significant challenges in attracting suitable candidates to teaching, we are very fortunate to have a highly educated and committed teaching force. We have continued to attract entrants to teaching of a very high calibre even during a period of economic prosperity, which contrasts with many other countries where the demand for teaching declined in such circumstances. Teaching remains a high status profession and entrance to teaching at both primary and post-primary level continues to be very competitive. For example, entrants to primary teaching continue to achieve a high level of points in their Leaving Certificate Examination and come from the highest achievement quartile of the students in the examination.

The development of the Literacy and Numeracy Strategy also demonstrated the strengths of the education departments in our teacher education institutions. The quality of the written submissions received from individuals, departments and whole colleges was very impressive, as you will see if you visit the Department's website. Almost all of them encompassed superb wide-ranging reviews of current national and international research on literacy, numeracy and teacher formation. They illustrated the way in which those in charge of teacher formation are acutely aware of, and major contributors to, the growing body of knowledge about teaching, learning and assessment of literacy and numeracy. These contributions had a direct, tangible impact on the Strategy. I believe that the development of Ireland's Literacy and Numeracy Strategy also points to the key role that the Teaching Council can play in improving educational standards. Long before the strategy was thought of, the Council, working within a policy framework set by the Minister for Education, had begun to evaluate and ask challenging questions about the effectiveness of existing teacher education courses. The Council's officers and committees worked closely with Department officials in setting the targets and defining the actions that were incorporated into the National Literacy and Numeracy Strategy. I am glad to have this opportunity to acknowledge publicly the major contribution that Council and particularly its Director, Áine Lawlor, played in ensuring that the teaching profession helped to shape the sort of professional development we will need to realise the targets in the Strategy.

Indeed, the work of the Teaching Council and others has pointed to some of the longstanding concerns that we have about teacher education. We know that the quality of entrants to teaching and the competences of our teaching graduates and teachers with regard to literacy and numeracy cannot be taken for granted. For example, low mathematical ability among a number of students entering undergraduate initial teacher education has been of concern for some time. So, too, has the ability of students in Irish. There is also clear evidence that existing teacher education courses are providing insufficient opportunities for young teachers to develop their own literacy and particularly their numeracy skills. While the submissions from the colleges and university departments were a rich source of knowledge about teaching, learning and assessment in literacy and numeracy, concerns have been expressed that only a minority of student teachers enjoy opportunities to engage with this critical body of professional knowledge and practice in their pre-service courses. Partly, this is to do with time: for some years we have known that the three year period for BEd courses



and the nine-month university based postgraduate initial teacher education courses have been of insufficient duration to adequately prepare teachers for the professional challenges of classrooms and schools.

That said, time is not the only factor: there was strong support from teachers and others in the public consultation on the Literacy and Numeracy Strategy for fundamental changes in the content of teacher education programmes; for better linkages between practical and theoretical components of teacher education courses; for a much greater focus on the professional understandings, skills and dispositions needed for effective professional practice in the area of literacy and numeracy; and for much better professional courses generally for second-level teachers.

Weaknesses also exist beyond initial teacher education. The introduction in 2010 of the free pre-school year in the Early Childhood Care and Education Programme has improved the availability and access of children to pre-school provision, but has brought further challenges in ensuring that leaders and teachers have the skills necessary to support the development of emergent literacy and numeracy skills. And it will be of no surprise to you that a strong theme in the consultations on the Strategy was the need for high quality professional development for serving teachers and current and future school leaders.

For all these reasons, the Strategy includes:

- Higher entry requirements
- Longer initial teacher education courses
  - 4-year BEd
  - 2-year diploma for graduate entrants to primary and post-primary teaching
- Increased time in school-based experience – a developmental experience
- Replace the current humanities/academic electives in some BEd programmes in order to facilitate major changes to course content to develop student teachers' understanding and ability to apply skills in areas such as the following:
  - Children's language acquisition
  - Development of second language learning
  - Parents supporting their children's learning
  - Teaching and learning of literacy and numeracy
  - Literacy and numeracy across the curriculum, not just for teachers of English, Irish and mathematics, but for teachers of all subjects
  - Teaching of children with special and additional learning needs (SEN, EAL, disadvantaged, etc.)
  - Digital literacy and how ICT can be used to support teaching and learning
  - Teaching in Irish-medium and immersion settings
  - Use of assessment for formative, diagnostic and summative purposes

As an aside, can I say that one of the greatest challenges to us and for teacher educators will be to help the Irish school system to use both assessment for learning and assessment of learning to improve student outcomes. Several actions in the Strategy will support this, including changes to the way in which the curriculum is written; new requirements regarding the use of standardised tests; and better reporting to parents and to the Department for national monitoring. The Minister has made it clear that he is not interested in publishing league tables of schools, but we need to ensure that a range of assessment approaches are

used professionally to monitor learning, to evaluate practice and to improve teaching. The reform of teacher education courses presents an ideal opportunity for colleges to address these needs among future and indeed existing teachers.

The Strategy also includes:

- Mandatory participation in induction programme for beginning teachers
- Focussed CPD for teachers on teaching, learning and assessment of literacy and numeracy as part of ongoing professional development requirements
- Targeted CPD for principals

Progress has already been made on some of these changes. For example, over 10,430 primary teachers completed in-service courses in literacy over the summer period, with another 1200 attending courses on numeracy and a further 1230 completing courses on Irish. Additional staff have been recruited for the Professional Development Service for Teachers which will be rolling out courses for principals in the current school year. A pilot project will commence shortly in which the Inspectorate will be working with schools on a self-evaluation model.

All of these changes have implications for your role as teacher educators. I welcome the publication of the Teaching Council's Policy on the Teacher Education Continuum and its guidelines for course providers, which have signalled the new requirements for course content, and have sought the views of colleges and others on the proposed higher entry requirement for courses.

I don't underestimate the challenge that these changes will pose for the Council, the Department, for the large number of teacher education providers that we have in Ireland and the staffs in those colleges and university departments. Fundamental re-structuring of courses and provision will be required if we are to realise the continuum of teacher education that we want and need. But I believe we have at this time an important opportunity to effect changes that many have advocated for some time, and gain real improvements in the fundamental skills that young people need. Your own discussions today and tomorrow here in Cavan can be a further step in realising these ambitions and in securing the contribution of teacher education to what Minister Quinn has described as "a concerted national effort to achieve world-class literacy and numeracy skills among our children and young people."

Go raibh maith agaibh.



## THE NORTHERN IRELAND LITERACY AND NUMERACY TASK FORCE

### **Sir Bob Salisbury**

#### **Chair, Northern Ireland Literacy and Numeracy Task Force**



Good morning everyone. You may have seen me smiling when Dr Hislop was talking about this impressive house, because I have driven from Omagh this morning over the mountains from Fivemiletown, and the country was delightful – pheasants everywhere and then an approach by this lovely drive to come across this magnificent house in such a delightful location – it just made me smile. Not just because of the beauty of the place, but also because arriving here brought back a certain memory.

A few years ago, I had been asked to speak at a conference and was driving along the road when a pheasant flew in front of the car ahead of me, was hit and dropped on to the road. I stopped and it didn't appear to be knocked about and was plump, so I put it into the boot of the car and drove to the conference. The venue was an old hall, with a lengthy drive like this one, and the Head Boy and the Head Girl of a prestigious school were waiting to greet me, both taller than I am, and both in immaculate uniforms.

"Are you the gentleman doing the conference keynote this morning"? they asked. "Yes – I'll just get my briefcase from the boot", having forgotten totally about the bird. I opened the boot and there was the pheasant standing on my briefcase, walking around with muddy feet and watching me with his beady yellow eye. The bird seemed totally unharmed and must only have been stunned when it hit the car. Head Boy and Head Girl were looking over my shoulder – the world went deadly quiet and I was thinking 'what do I do now?' Suddenly it saw its chance for freedom, flew off into the nearby countryside with a whirr of wings and a great clatter and I took the briefcase out of the boot. A couple of feathers were stuck to it.

"These damn things get everywhere these days," I said as I dusted them off and we walked off to join the conference. All through the keynote, Head Boy and Head Girl stood at the back – arms folded with expressions which clearly said 'some real weirdos get invited to these conferences' – so I hope at the end of this you don't think that SCoTENS have invited another weirdo to speak to you.

#### **Why a Task Force?**

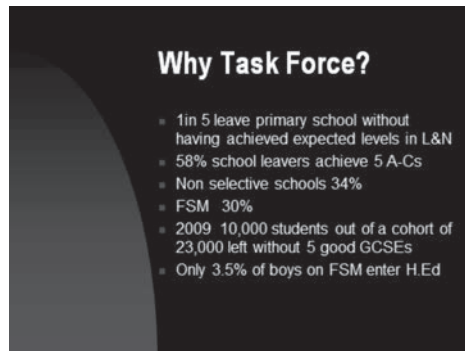
- Response to NI Audit Office and Public Accounts Committee
- A marked gap between the highest and lowest performing students.
- A significant 'tail' of underachievement.
- Inefficient use of finance.
- Denial of the need for change.

Time is short, so I will go quickly through the work of the Task Force, why there was a Task Force, and some of the key recommendations that we have made. The group was set up as a response to a very critical audit on how public money was being spent and how little improvement schools had made since 1998. There is still a marked gap between the highest performing students in Northern Ireland and the lowest, and a significantly long tail of underachievement in our schools. The audit commission were concerned that there did not seem to be any noticeable return for the £40 million that was put into schools in 1998 to

try to improve matters. Our task initially was to ascertain why it was that such a large sum of money had made little difference and – I have to be honest – some of the findings which emerged were quite depressing.

One primary teacher in answer to the question – “Why in your view did the Reading Recovery Initiative not make any impact in this primary school”? – replied: “The head spent most of the money on a new fridge”.

Hopefully this was an extreme case and was not in any way typical, but the confusion with policy and where the money went was one of the key reasons for the formation of the Task Force. There was also a persistent belief that the current system was working well, so why meddle with it. It’s been an enduring myth in Northern Ireland that education here is perfect, internationally renowned and doesn’t need any change, but when the actual data is analysed a somewhat different picture emerges and the truth of the situation hit our working group very forcefully.



### Why Task Force?

- 1 in 5 leave primary school without having achieved expected levels in L&N
- 58% school leavers achieve 5 A-Cs
- Non selective schools 34%
- FSM 30%
- 2009 10,000 students out of a cohort of 23,000 left without 5 good GCSEs
- Only 3.5% of boys on FSM enter H.Ed

For instance, one in five pupils leave primary school without having achieved the expected levels in literacy and numeracy. In non-selective schools only 34% of youngsters achieve satisfactory levels – those with free school meals only 30%. I do not intend to go through all of the relevant statistics because you can read them on the screen, but one thing the team did find quite staggering was that, in 2009, 10,000 students out of a cohort of 23,000 left without five good GCSEs and only 3.5% of boys on free school meals went on to higher education. So it is certainly not the overall picture that anyone involved in education would want and is most definitely not meeting the needs and rights of all of the young people in Northern Ireland.



### Task Force

- Formed in Jan 2008
- Seven 'volunteers'.
- Meeting seven times a year.
- Supported by DENI staff
- Reporting once a year to the Education Committee.
- Open agenda.

The Task Force was formed in 2008 and was not representative of all stake holders, but was simply seven chosen people, volunteers if you like, consisting of a very successful secondary head, an innovative primary head, a renowned professor from teacher training in one of the universities, an outstanding head of maths and a respected researcher from Dublin. That was the range of experienced people who made up the team, and I want to stress at the outset that these people held no political allegiance nor were they under any obligation to come up with ideas or strategies which endorsed either the work of DENI, the views of the various teacher representative groups or anyone else for that matter.

We were given a free hand – an open agenda – to say exactly what we thought and what, in our view, needed to be done to improve matters. The Task Force decided to invite the relevant stakeholders to explain what they were actually doing in order to ascertain what





their wishes were for the future and what they believed would raise standards in schools. This information was assimilated, added to by the experiences of the team and reported once a year to the Department's education committee. The final report will be published in November, but it has been very reassuring to me that some of the earlier reports have already had a noticeable impact although, in truth, there is still some way to go.

### 21<sup>st</sup> Century Skills?

- Literacy and Numeracy
- Flexibility/ Adaptability
- Global Outlook
- ICT and Technology
- Innovative, Entrepreneurial attitudes.
- Communication skills
- Working in Teams

Our starting discussion, and one which we all felt had not been explored nearly enough in the current climate of change, was what precisely should we be teaching in our schools and what should underpin everything that we do? What are the skills that will make our young people 'marketable' as individuals and successful as people in the next fifteen years – whatever the world throws at them? It is certainly true that the rate of change in our world will increase and where it goes is largely unpredictable. It seems to me that far too many of the schools that we looked at were still looking backwards, not forwards, and are still teaching for the past thirty years, rather than trying to think 'What are the skills and competencies that our young people will really need in the next fifteen years?'.

Some years ago I was head of a school in a mining area, and overnight the mines were closed down, all the associated industries went and the whole economic base of the area vanished – so we had no option but to question what our schools were doing to help people who faced a new and different future. This is not an isolated situation. Who would have predicted for instance, the situation in Ireland at the moment? The collapse of the building industry, the disappearance of shipbuilding, lawyers out of work, pharmacists struggling – we could go on, but what happens in the next fifteen years is a crucial question, and we should be constantly asking and deciding how our schools should best respond.

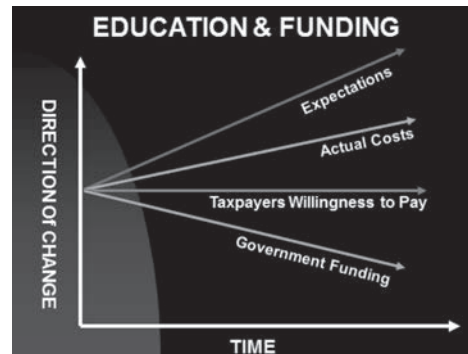
The list on the power point is the one that we came up with and is certainly not definitive, but at least it could form a starting point for a more in depth discussion. Certainly competency in literacy and numeracy for all children is vital, as this conference is saying, but do we teach 'flexibility and adaptability' in our schools? Do we teach a global outlook? Look at where students go when they leave school – they are all over the world in five years, a trend which has increased dramatically recently. But are we really thinking globally in our teaching?

To give you a smile and a short break from the gloomy picture I am painting, in the school where I worked we had every single notice in six languages – and I was very proud of that. On my door it said Head Teacher in six languages including Arabic and when speakers of Arabic walked past, they always looked at that door, read the list of languages and smiled. It's only since I have left that I wondered, did the Arabic really say Head Teacher!

Of course we need competence in ICT and Technology, but have we examined whether innovation, entrepreneurial attitudes, adaptability and flexibility can actually be taught? Every teacher I have ever met will stress the importance of confidence and high level communication skills and the vital need for young people to be able to converse fluently in

new or unfamiliar situations, but in practice many schools do not encourage this in their day-to-day approaches. Last year at a school renowned for its academic achievement, I followed a pupil for the whole day – a ‘pupil pursuit’ exercise – to find out what the overall impact of the school was on an individual student. This girl – she would be 13 – didn’t speak once in lessons; she was not asked a question; she did not ask a question; she went through the whole of the day, and I suspect the whole of the week, without saying anything. If we think that literacy and numeracy and high level communication skills are vital for the future of young people, then just what are we doing about it in our schools?

We also knew that whatever suggestions and ideas we came up with had to be cost-effective. We could not come up with recommendations that were saying you must put vast amounts of money into this, because in the current climate it clearly would never happen. This is a graph I drew up a few years ago, and I don’t think the central point has changed a great deal – in fact if anything it has become more pronounced. The expectations of our schools, what society expects from our classrooms, seems to be expanding almost daily. We had a notice-board in the school where I worked and every time a politician announced: ‘I am expecting schools to take the lead in this’ we used to put a little post-it sticker on the ‘To Do’ board. So we had ‘healthy eating’ ‘preparing people for the Olympics,’ ‘checking pupils for obesity’ - you name it, we had it up there and the board simply got fuller and fuller.



Even the decline of English cricket was put down to attitudes in schools. England is now the number one cricket team in the world, but so far I have not heard a single politician say the reason that we are now successful is because of the work of teachers and schools. To be honest though, and I wouldn’t want this to go beyond these four walls, the real reason that we are top now is not because of revitalised work in schools, but because we have got two very good South African players and one brilliant player from Dublin in the team – basically it’s these three ‘ringers’ who are now getting us somewhere!

The actual costs of running our schools is going up. Taxpayers’ willingness to pay any more for education is roughly staying the same and the government funding is going down, so the gap between what we need and what we are actually getting is becoming wider. The future will undoubtedly be about making more of less, and the Task Force knew it was therefore pointless saying that the way forward would be to inject a lot of money into this, that or the other programme because in practice it would never happen.

So some key recommendations we felt would help.

It must be incredibly difficult for a head teacher in a small rural primary school to know just how well they are doing comparatively. There

## Key Recommendations

- Unsystematic collection of data so benchmarking is difficult.
- Development of a ‘value added’ measures.
- Development of ‘pairing’ systems between schools.
- Standardised transfer of data.
- Effective use of data.



are good schools and there are poor schools, but just 'how good' or 'how poor' is guesswork unless there is a system of benchmarking data to help heads. Not league tables but simply standardised statistical evidence which will enable reliable comparisons to be made with similar schools elsewhere. Development of 'value added' measures would also help, as would a network of 'paired schools' where teachers can share good practice. Standardising the transfer of data between schools and the effective use of data in schools are areas for urgent review. Most schools collect data in some form, but many of them don't appear to use it productively to impact on their teaching strategies.

### Key Recommendations

- Development of an individual 'learning plan' for every child.
- Early intervention programmes.
- Greater involvement of parents.
- Use of Governors
- 'Blurring the edges' between the school and community.

We also felt that it would be incredibly powerful to develop individual learning plans for every child. The last thing anyone involved with education wants is for children who need extra help to be allowed to slip through the net, and we felt that schools that were putting resources into early intervention were particularly effective. Assessment, early intervention and persistence seemed to be the order of the day because effective remedial programmes certainly become increasingly difficult as the child gets older. Those of you here who are familiar with post primary or secondary education will know that once the youngsters go beyond the age of 11 it is incredibly difficult to get them back on track. Starting early is what matters.

In Northern Ireland greater involvement of parents needs to be encouraged to support the work of schools. This would be productive in pushing forward the importance of literacy and numeracy in our schools. The Task Force felt too that governors could play a more powerful role in shaping the way teachers and head teachers organise their approaches by asking key questions about collection of data, intervention strategies, improvement levels etc. Questions too about the use of the wider community in supporting educational achievement and the ways the school makes use of charities, local industries and sponsors to assist their work.

### Key Recommendations

- Initial teacher training
- Distribution of teacher expertise.
- Use and training of classroom assistants.
- Internal culture for analysing and sharing pedagogy.
- Dissemination of good practice.
- Underperforming teachers and school leaders.
- Mandatory PQH.

In initial teacher training we felt that particularly in Northern Ireland, where there is a high quality of entry, it is essential that new entrants have good Maths and English qualifications. We found that one of the potential weaknesses of the current system, particularly in very small two teacher primary schools, was that neither teacher had a specialism in Mathematics and there is a need for further research to find just how widespread this pattern might be. The TF team also felt that perhaps not enough training and thought had been given to the use of teaching assistants and how they can be further trained and deployed.

Many schools have a thriving internal system for sharing best practice - of looking at the repertoires of the most effective teachers and saying 'how do you do this?' Others have very



much a closed shop and this sharing of ideas is not within their culture, and the Task Force felt that this is a wasted resource – there is untapped potential, including for disseminating good practice both between schools and internally between classrooms. I have met some truly great teachers over the last three years, and some of them do not know just how good they are and thus their expertise has never been exploited for the benefit of others in the profession. The old saying that ‘you never forget a good teacher’ is a true one, but conversely, it can take a lifetime to get over a poor teacher, and the Task Force thought that we have got to be a lot harsher with under-performing teachers and under-performing school leaders.

The last four Chief Examiner’s reports in Northern Ireland have said that a quarter of all primary school leaders are not good enough and a third of all post-primary leaders are underperforming. The Task Force quite rightly asked what is being done to rectify this situation. Surely it is not merely sufficient to write this up in a general report; some urgent action ought to follow in the schools identified. Our young people are our future, so why on earth are we prepared to tolerate this prolonged poor performance in many of our schools?

One other thing, which is linked to this last point and we thought ought to be pushed concerns leadership training. Tom Hesketh of the Regional Training Unit has been running a training course for future heads for years, and it’s an excellent, practical course, producing really enthusiastic future school leaders, but at the moment it is not mandatory and it ought to be. We should endeavour to make all school leaders go through this kind of training before taking up their appointment and then we will begin to see an impact on the very matters we have discussed this morning.

#### Key Recommendations

- Formation and implementation of the Educational Skills Authority.
- School strategic planning for literacy and numeracy.
- Public attitudes towards numeracy.
- Use of substitute teachers.
- Transfer tests.
- Rationalisation of schools.

The formation of the Educational Skills Authority, a body which will oversee in Northern Ireland many of the recommendations made here today, is wobbling a bit, but hopefully it will eventually happen and work to move things forward. To really raise performance in literacy and numeracy we must in the future be able to see a line between what a teacher is teaching, the school development plan, the sort of questions the governors are asking, the policies put out by DENI and the work of the ESA so we can both trace the progress made and identify any logjams in the system.

One Task Force member feels particularly adamant that we should also work to change the way we generally regard Mathematics in society and our attitudes to numeracy. She argues, quite rightly, that people are happy to publicly admit that they are barely numerate, but would be horrified to take a similar stance in regard to literacy. Her point was well made last week when Ed Miliband was preparing a speech, one of the national papers in England said: “He was a mathematical geek at school.” What sort of message does that send out to young people? Let’s all agree to attack this nonsense!

Work certainly also needs to be done in the effective use of substitute teachers.

The current shambles surrounding selective schools and transfer tests still plagues Northern



Ireland. It is obvious that urgent strategic discussions beyond the remit of this Task Force need to take place about equality of opportunity, surplus places, the cost of segregated schooling and a host of other major factors which ultimately will have a significant impact on achievement overall.

The Task Force is being listened to. *Every school a Good School; Literacy and Numeracy Policy; Count, Read: Succeed* are all excellent documents, and if all the recommendations contained in these documents are carried out we would eventually have an internationally excellent education system. There is a definite sea change within the media and the public perception of the current school system, and challenge and discussion, based on a greater reality, is now beginning to take place. Many key issues are being addressed, but it seems

to me and the rest of the Task Force that a massive cultural change is required and at the moment we are not going anyway near fast enough to make this happen.

Mario Andretti the Italian racing driver had it right: "If everything seems under control you are not going fast enough!"

Thank you for inviting me to join your conference. I want to finish with a short story, just to remind us all at the start of this conference that what we talk about over the next two days is not just an academic exercise but, if we get it right, will have a major influence on the lives of the students we meet in our schools and colleges.

When I was a head, we assessed every single youngster in terms of literacy and numeracy and, where necessary, gave those who needed it a remedial crash course for the first six months. One lad, now aged thirteen, who initially had needed a bit of extra help with his written work, stopped me one day in the corridor.

"Sir, can I ask you a question?"

"Of course."

"Well I was watching a programme last night on the TV and wondered what I would need to do if I want to be a vet?"

Now I knew he came from a mining background, had very few books in his home and that none of his relatives had ever gone on to higher education.

"Have you got a piece of paper?" I asked. And I wrote: 'To be a Vet – you will need a minimum of seven good As' for a start at GCSE; you will need 4 A levels, all A's – physics, chemistry, biology etc. You will have to show that you really want to be a vet so you will

### Outcomes

- *Every school a Good School*
- *Literacy and Numeracy Policy*
- *Count, read: succeed.*
- Change in public and media perceptions.
- Key issues being addressed.
- Culture change.

### The Challenge

- Mario Andretti
- 'If everything seems under control, you're just not going fast enough!'

need to work in kennels, work alongside a vet as work experience, get a job in a pet shop, work on a farm etc., and I listed all of these things. You then apply to Vet School – London School of Veterinary Science is as good as you will get, but getting in there will be highly competitive. Five or six years of vet's training and then you will be a vet, OK? I wrote all of this down. "Thank you Sir" he said, folded it up and off he went.

He got his 7+ A's. He went on to start his 4 A' levels. He did additional physics at the FE College; he did physics twice in other words – because he didn't think much of our physics teacher – I didn't either. The lad applied to the School of Veterinary Science and they turned him down, and I got on to the admissions officer and I said: 'He has done everything that we have required. He is from a tough background. He has is predicted to get 4 A's and I bet he will get them at A level. Why exactly have you turned him down?' The chap had clearly not really read his application carefully enough, but after an hour of me badgering him, he eventually agreed to have another look at it. A second letter duly arrived saying that they would give him a place, but it would be reviewed after each term for the first year. Off he went to London. My wife took a phone call a few years later, right out of the blue, and it was his mother who said 'I am just phoning to say that Gary has qualified as a vet. Not only that, he came out as top student in his intake this year and he is having a few beers and a few sandwiches down the pub and he insists that you and your husband come along.' When we got there, I said 'I am absolutely delighted you finally cracked it, Gary.'

'So am I' he said, 'here is your piece of paper back'. He had ticked all of the headings and where I had written 'and then you'll be a vet OK?' had added 'I am – OK!'

So my message to us all today is if we can change even one life by what we do in our schools, and what policies we design and implement, our deliberations will have been worthwhile. Our work today is surely about improving the life chances of all young people and what better legacy could we have than that.

Enjoy the conference.



## LITERACY AND NUMERACY – BEYOND DEFINITIONS? (1)

**Professor Jackie Marsh**

**Professor of Education, University of Sheffield**

In the development of any new literacy curriculum that is appropriate for the twenty-first century, there are a number of key principles that should be addressed. The first principle is that literacy education needs to be informed by a definition of literacy that is fit for purpose in the new media age. We do need to move beyond definitions at some point, however, in order to develop approaches to the teaching and learning of literacy that will ensure our pupils emerge from the schooling system able to meet the challenges and opportunities that lie ahead, many of them unimaginable to us at this stage in the technological revolution that has taken place over the past thirty to forty years. In this commentary, I will focus on the following issues:

1. The literacy skills, knowledge and understanding required for the digital age
2. Developing a 21st century literacy curriculum
3. Pedagogy for the digital age
4. Principles of assessment in the digital age

I will conclude by identifying what I perceive to be key issues for the future of literacy education in the decades ahead.

### **The literacy skills, knowledge and understanding required for the digital age**

There is no doubt that children still need to acquire the skills that will enable them to encode, decode and make meaning with alphabetic print, despite the relentless pace of change which means that modes other than the written word are becoming increasingly significant (Kress, 2003). Navigating the Internet and other complex screens across computers, handheld computers, mobile phones and mobile technologies such as iPads requires users to be competent readers and writers of written text. This activity, however, also demands other skills and knowledge, such as the ability to make meaning using a variety of modes, including image, sound and movement. This is referred to as 'multimodality', defined in the following way by Flewitt (in press):

The term 'multimodality' describes approaches to representation that assume communication and meaning-making are about more than just language. Multimodality takes into account the many different modes in printed and on-screen texts (such as image, layout, colour and language) and also the different modes that people use as they engage in face-to-face interaction (such as gesture, gaze, artefacts and language), and considers how these modes work together to create meanings in a 'multimodal ensemble'.

Over the course of a number of research projects undertaken in the last decade (e.g. Marsh, 2009; 2010a; Marsh et al., 2005) in which teachers were engaged in developing children's multimodal skills, knowledge and understanding, a range of competences that were developed through multimodal analysis and authoring activities were identified, detailed in Table 1.

**Table 1: Skills, knowledge and understanding developed across the projects**

Key competences	Examples from projects
Understanding of the affordances (i.e. what different modes can and cannot do, the meanings they can and cannot afford) of various modes and the ability to choose appropriate modes for specific purposes	Children produced a wide range of multimodal texts that required understanding of the affordances of modes and how modes could work best together to achieve goals. These included texts that were solely written or oral or consisting of only still images or moving images; texts combining one or more of these modes; animated films; live action films; podcasts; animated powerpoint presentations; photostories.
Understanding of various media and the ability to choose appropriately for specific purposes	Children used a wide range of media in the production of texts and made critical judgements about which media to use.
Skills in the various modes that enabled them to decode, understand and interpret, engage with and respond to, create and shape texts	Children developed a wide range of skills including knowledge of the alphabetic principle and abilities in reading and writing print; ability to read both still and moving images; understanding of the features of various genres; understanding of the principles of transduction in the production of multimodal texts; ability to navigate texts across media, follow hyperlinks, read radially etc.
Ability to analyse critically a range of texts and make judgements about value, purpose, audience, ideologies	In the development of multimodal texts, children were reviewing a wide range of online and offline texts in order to inform their work. They also regularly reviewed their own and peers' work.
Ability to relate texts to their social, cultural, historical contexts and literary traditions	Children were able to relate multimodal texts to their social, cultural and historical contexts and were adept at recognising intertextuality.
Ability to select and use appropriately other texts for use in the design process	In the blogging project, children produced texts that remixed media content. Children made animated and live action films, and powerpoint presentations that incorporated music.
Ability to collaborate in text production, analysis and response	Children were successful in collaborating both with known and unknown others in the production and analysis of texts. Social networking software, for example, enabled them to comment on others' work and develop an understanding of the value of networks.



In addition to the way in which the skills required to communicate effectively in the digital age are changing, the kinds of literacy practices in which we engage are becoming transformed. For example, people are able to communicate with many people at once, including both known and unknown audiences, using tools such as email, chat facilities and social networking sites. Authorship of texts is often multiple in nature and frequently anonymous on the Internet. Pupils, therefore, need to acquire the ability to make judgements about what sort of textual practices are appropriate for specific purposes. Given these developments, it is appropriate that in Ireland, the National Strategy for Literacy and Numeracy (DES, 2011) promotes a broad definition of literacy, which:

...includes the capacity to read, understand and critically appreciate various forms of communication including spoken language, printed text, broadcast media, and digital media (DES, 2011, p. 8).

This definition offers a sound platform for the development of approaches to learning and teaching that will enable pupils to develop the types of skills, knowledge and understanding outlined in Table 1.

### **Developing a 21st century literacy curriculum**

A recent review of research in the teaching and learning of literacy in the early years undertaken for Ireland's National Council for Curriculum and Assessment (Kennedy et al., 2012) emphasises a broad and integrated approach to the development of a literacy curriculum. Such a curriculum should include the following elements:

- A systematic approach to the teaching of phonological/ phonemic awareness and phonics;
- Explicit teaching of other 'building blocks' required for encoding/ decoding e.g. word identification, vocabulary, fluency, spelling, handwriting, punctuation, grammar, comprehension.
- Including individual/ dyad/ group/ whole class opportunities for interactive reading and writing/ multimodal authoring for authentic purposes;
- The use of successful strategies to promote creativity such as: literature circles; authors' theatre; the use of play, drama, art, music; the use of visiting authors/ illustrators; teachers explicitly modeling reading and writing; the engagement of family and community in the curriculum;
- Attention paid to the skills, knowledge and understanding required for communication in the digital age, outlined in the previous section;
- Ensuring pupils have access to a wide range of high quality fiction and non-fiction texts in a range of media.

Importantly, curricula that draw from pupils' out-of-school experience and use these as a starting point for learning enable can offer motivating and meaningful learning opportunities. There is a range of evidence that focussing on children's popular cultural interests in the curriculum can promote engagement and innovation (Marsh, 2010b). In recent years, studies of the relationship between popular culture and the literacy curriculum have focused on media and new technologies. The digital turn in the study of children's popular cultural practices, which mirrors somewhat the changes of interest in New Literacy Studies generally (Mills, 2010), has led to a series of projects examining the inclusion of digital literacy texts and practices in the early childhood curriculum. Reviews of this area of work can be found in Levy and Marsh (2010) and Levy, Yamada-Rice, and Marsh (in press).



There have been a number of highly favourable outcomes in terms of pupil engagement and achievement reported from projects which utilise digital technology and/ or popular culture for creative production in the classroom. The focus on integrating media and new technologies into the literacy curriculum has had a discernible impact. For example, in the 'Digital Beginnings' project (Marsh et al., 2005), nine early years settings introduced aspects of popular culture, media and new technologies into the communication, language and literacy curriculum. Activities included making electronic and digital books, watching and analysing moving image stories and creating presentations using electronic software. One of the aims of the study was to examine the impact of these action research projects on the motivation and engagement of children in curriculum activities related to communication, language and literacy. In order to identify this, practitioners undertook three observations of 14 children prior to the project and three observations of the same children during the project, using *The Leuven Involvement Scale for Young Children* (Laevers, 1994). Outcomes indicated that children's levels of engagement in activities were higher when the curriculum incorporated their interests in popular culture, media and new technologies (Marsh et al., 2005).

Similar findings were identified in the Home School Knowledge Exchange Project in the UK (Feiler, Andrews, Greenhough, Hughes, Johnson, Scanland & Yee, 2007). Activities were developed in four primary schools, two in Bristol and two in Cardiff, which aimed to draw on the practices and experiences of home in the classroom. For example, children brought to school in a shoebox artefacts that were important to them, including those related to popular culture, which were then used to support literacy. Quantitative findings with regard to the impact of the project on reading were inconclusive, but qualitative findings suggest that the project had a positive impact on children's confidence and self-esteem and teachers' pedagogical practice. Similarly, projects in which film analysis was embedded into the primary writing curriculum led to increased attainment in standardised assessment tests (Marsh and Bearn, 2008). Such success cannot be attributed simply to curriculum content, however – pedagogical strategies also play an important part.

### **Pedagogy for the digital age**

In any major literacy education initiative, there is a need to consider pedagogical strategies in addition to curriculum content. There are important lessons to be learned from recent history in this regard. In the development of the National Literacy Strategy (NLS) in England in the last decade of the twentieth century, insufficient attention was paid to ways in which pedagogy could be developed to be sufficiently student-centred and to support the social construction of knowledge. As a result, numerous research projects demonstrated that within the National Literacy Strategy pedagogy remained traditional in nature, undermining the attempt to introduce a more forward-looking curriculum. As Hardman, Smith and Wall (2003) argue in their study of the implementation of the NLS:

The findings suggest that traditional patterns of whole class interaction have not been dramatically transformed by the strategies...In the whole class section of literacy and numeracy lessons, teachers spent the majority of their time either explaining or using highly structured question and answer sequences. Far from encouraging and extending pupil contributions to promote higher levels of interaction and cognitive engagement, most of the questions asked were of a low cognitive level designed to funnel pupils' response towards a required answer. (Hardman et al., 2003)



Pedagogical approaches suitable for a 21st century literacy curriculum should include the use of questions that promote higher-order thinking skills and should also enable pupil talk to be more extensive than in the classrooms studied by Hardman and team. Further, there are a number of key principles that should underpin pedagogy if it is to foster effective learning. These can be conceptualised as the 'five Cs':

**Collaboration:** This is important in any approach to learning and teaching that is based on social-constructivist principles. Pedagogical approaches should enable pupils to collaborate in dyads, small groups and large groups that are both mixed ability and same ability, in friendship groups and mixed friendship groups, mixed gender and same gender groups. Utilising these various group structures across contexts, being flexible in approach to suit different purposes, will enable teachers to address specific learning outcomes.

**Co-construction:** Linked to having opportunities to collaborate, co-construction of learning enables pupils to engage in situations in which they are cognitively stretched and in which teachers can offer the kind of 'just in time' scaffolding and inter-subjectivity that leads to effective learning.

**Choice:** Enabling pupils to choose the direction in which they want their work to go provides them with opportunities to make informed decisions and deploy skills such as the ability to prioritise, sequence tasks effectively and solve problems.

**Control:** This is linked to the previous category, so that when children have more choice and control over the pace and content of their learning, they are more engaged and motivated as learners. Risk-taking leads to experimentation and creativity, both important in the development of literacy skills, knowledge and understanding.

**Community engagement:** Opening out the classroom to the external community is a powerful means of developing authentic purposes for reading and writing. This was reinforced in the Booktrust 'Everybody Writes'<sup>3</sup> project, in which schools across England engaged school communities, such as governors and local communities, in their writing curriculum. The outcomes included enhanced attainment in writing, but also more motivated and engaged pupils. The advances in social networking now mean that it is much easier to engage outside audiences within the curriculum, using sites such as 'Twitter'.

Linked to curriculum and pedagogy, of course, is assessment. In the next section, issues relating to the assessment of literacy as it is changing in the digital age are addressed.

## Principles of assessment in the digital age

Assessment of literacy has become a complex process in an era in which children are developing skills, knowledge and understanding across a range of modes and media. Before considering *what* is to be assessed, the *how* of assessment needs to be considered. As Murphy suggests:

Warrants for assessment should recognize the possibilities as well as the limitations of design in relation to the situation or circumstances of any one assessment activity. In

<sup>3</sup> <http://www.booktrust.org.uk/professionals/teacher/everybody-writes-project/>



particular, the representational possibilities for knowing offered by assessment designs should be acknowledged as limiting some representations while enabling others. Reasoned and reasonable warrants form the basis for thinking about the consequences of an assessment.  
(Murphy, in press)

This would suggest that we need a broad portfolio of tools to draw on in assessing pupils' literacy learning, including diagnostic tests, observation, analysis of products, questioning, the use of diaries and portfolios, and techniques such as recall. Certainly, over-reliance on high-stakes testing is counter-productive and can narrow the curriculum, as Stanley et al. (2009) argue:

Heavy reliance on external testing in a high stakes environment has undesirable features that may work against assessment for learning. It tends to promote "teaching for the test" (Morrison and Tang Fun Hei, 2002) and may create construct-irrelevant variance from the anxiety and low self-esteem exhibited by the least successful students (Harlen and Deakin-Crick, 2003). Some students may be turned off formal learning forever.  
(Stanley et al., 2009)

In considering reading and writing in the digital age, we also require approaches to assessment that capture and enable teachers to analyse multimodal interactions across media and so, to the above list, we could add electronic portfolios and the use of screen-capture software, for example.

In terms of identifying the knowledge, skills and understanding that should be assessed, we are in the early stages of developing a full understanding. The United Kingdom Literacy Association has undertaken some work, under Eve Bearne's directorship, mapping the assessment foci for reading developed by the now-defunct English Qualifications and Curriculum Authority onto the reading and analysis of multimodal texts. In 'Reading on Screen' Bearne and team draw on a range of projects undertaken in schools and found that the children's learning could be mapped on to the existing assessment foci (see Table 2).

	Assessment focus	Skills and strategies observed
af1	Use a range of strategies, including accurate decoding to read for meaning	Children using the internet, CD Rom books and computer games used similar decoding, syntactic and semantic strategies on screen as in book-based reading
af2	Understand, describe, select or retrieve information, events or ideas from texts and use quotation or reference to text	Children retrieved information which interested them from the internet, selecting and quoting from sites to suit their purposes
af3	Deduce, infer or interpret information, events or ideas from texts	Children demonstrated these skills as they used computer games, the internet and CD-Roms



af4	Identify and comment on the structure and organisation of texts, including grammatical and presentational features at text level	Children held decided views on the structure, organisation and presentation of preferred screen texts, commenting particularly on images.
af5	Explain and comment on writer's use of language, including grammatical and literary features at word and sentence level	Children commented on language, image and music as they trawled the internet, highlighting key sections.
af6	Identify and comment on writer's purposes and viewpoints, and the overall effect of the text on the reader	Children identified the viewpoints shown in the content of sports sites on the internet.
af7	Relate texts to their social, cultural and historical contexts and literary traditions	Children used their out-of-school knowledge to help make sense of their reading.

However, these assessment foci need to be extended to enable the identification of progress in some of the skills outlined in Table 1. For example, how do we assess children's developing understanding of the visual mode, or their awareness of the grammar of moving image? These are areas that need to be focused upon in future work in this area. Bearne (2010) has recently drawn together the work of the 'Reframing Literacy'<sup>4</sup> project to offer an outline of how teachers might begin to understand the stages in pupils' analysis of multimodal texts and this work provides a significant platform for future developments, at the same time as highlighting the need for the extension of this framework to the production of multimodal texts.

## Future research in literacy education

In addition to the issues related to assessment that urgently need to be explored, there are a number of other areas in need of further research in the years ahead if literacy education is to be advanced. These include: (i) Inclusive practices – there is a need to examine literacy teaching which responds to cognitive and physical ability differences, language, and aspects of identity such as 'race' and gender. How can developments in digital technologies inform pedagogical approaches to diversity? (ii) Social justice issues – there is still a long tail of under-achievement related to socio-economic status, which requires an attempt to identify the contributing factors to this under-achievement, focusing in-depth on how the digital divide might contribute to attainment issues. (iii) Family and community engagement – we need to identify ways in which community 'funds of knowledge' (Moll et al., 1992) can be drawn on more effectively in the literacy curriculum, again ensuring this takes account of family digital literacy practices. (iv) Professional development – literacy teaching, learning and assessment are more complex than ever in the digital age, and therefore more challenging for teachers to develop the required range of skills, subject knowledge, pedagogical content knowledge/technological pedagogical content knowledge. This requires an integrated, recursive and inquiry-based approach to initial and continuing professional development. The issues identified above present us with a challenging agenda, but one which is essential if we are to develop a school system fit for the 21st century.

*4 A collaboration between UKLA, the British Film Institute, the Universities of Sheffield and Nottingham and the Centre for Language in Primary Education in which teachers in Leeds and Lincoln examined progression in children's analysis of films.*

## References

- Bearne, E. with Bazalgette, C. (2010). *Beyond words*. Leicester: United Kingdom Literacy Association.
- Bearne, E., Clark, C., Johnson, A., Manford, P., Mottram, M. and Wolstencroft, H. with Anderson, R., Gamble, N. And Overall, L. (2007). *Reading on screen*. Leicester: UKLA.
- Department of Education and Skills (DES). (2011). *Literacy and numeracy for learning and life. The national strategy to improve literacy and numeracy among children and young people*. Dublin: Government Publications.
- Feiler, A., Andrews, J., Greenhough, P., Hughes, M., Johnson, D., Scanlan, M. and Yee, W. C. (2007). *Improving primary literacy: Linking home and school*. London: Routledge.
- Flewitt, R.S. (in press).Multimodality. In J.Larson and J.Marsh (eds) *Handbook of early childhood literacy*. London, Thousand Oaks, CA: Sage.
- Hardman, F., Smith, F. and Wall, K. (2003). Interactive whole class teaching in the National Literacy Strategy. *Cambridge Journal of Education*, Vol. 33, 2, 197-215.
- Kennedy, E., Dunphy, E., Dwyer, B., McPhillips, T., O'Connor, M., Hayes, G., Marsh, J. and Shiel, G. (2012). *Literacy in early childhood and primary education*. Dublin: Government Publications.
- Kress, G. (2003). *Literacy in the new media age*. London: Routledge.
- Laevers, F. (1994). *Defining and assessing quality in early childhood education*. Leuven: Leuven University Press.
- Levy, R. and Marsh, J. (2010). Literacy and ICT in the early years. In D. Lapp and D. Fisher (eds) *Handbook of Research on teaching the English language arts*. New York: Routledge. pp168-174.
- Levy, R., Yamada-Rice, D., and Marsh, J. (in press). Digital literacies in the primary classroom. In K. Hall, T. Cremin, B. Comber & L. Moll (eds) *International handbook of research in children's literacy, learning and culture*. Oxford: Wiley-Blackwell.
- Marsh, J. (2009). Productive pedagogies: Play, creativity and digital cultures in the classroom. In R. Willett, M. Robinson, and J. Marsh (Eds.) *Play, creativity and digital cultures*. New York: Routledge.
- Marsh, J. (2010a). Social networking practices in homes and schools. In C. Bazalgette (ed) *Teaching media in primary schools*. London: Sage.
- Marsh, J. (2010b). *Childhood, culture and creativity: a literature review*. Creativity, Culture and education series: Newcastle Upon Tyne, UK. Available online: <http://www.creativitycultureeducation.org/research-impact/literature-reviews/>



Marsh, J. and Bearne, E. (2008). *Moving literacy on: Evaluation of the BFI training project for lead practitioners on moving image education*. Leicester: UKLA.

Marsh, J., Brooks, G., Hughes, J., Ritchie, L., & Roberts, S. (2005). *Digital beginnings: Young children's use of popular culture, media and new technologies*. University of Sheffield. Available online: <http://www.digitalbeginnings.shef.ac.uk/>

Mills, K. (2010). A Review of the "Digital Turn" in the New Literacy Studies. *Review of Educational Research*, Vol. 80, 2, pp 246-271.

Moll, L., Amanti, C., Neff, D. and Gonzalez, N. (1992). Funds of knowledge for teaching: Using a qualitative approach to connect homes and classrooms. *Theory into Practice*. Vol. 31, 132-141.

Murphy, S. (in press). Finding literacy: A review of the research on literacy assessment in early childhood education. In N. Hall, J Larson, & J. Marsh (Eds.), *Handbook of early childhood literacy* (2nd ed.). London: Sage.

Stanley, G., MacCann, R., Gardner, J., Reynolds, L. & Wild, I. (2009). *Review of teacher assessment: Evidence of what works best and issues for development*. London: QCDA.

## LITERACY AND NUMERACY – BEYOND DEFINITIONS? (2)

**Professor John O'Donoghue**  
**University of Limerick**

### Introduction

The education debate in the Republic has moved the twin issues of literacy and numeracy to centre stage for a variety of reasons, including the thrust of educational and economic policies that are seen to converge in the pursuit of a Smart Economy. Pressure to improve matters has increased appreciably following recent poor mathematics results in PISA.

Personally, I have been struck by the impact PISA has had on education policy makers and the general public. Then I thought PISA might serve a different purpose by unlocking education issues in the current debate.

This paper brings no statistics to the table, but rather looks to advance the debate on numeracy in the Irish Republic by examining issues surrounding numeracy as an educational task. This task is not helped by a lack of clarity or even confusion engendered by the multiplicity of concepts used in recent important reports dealing with literacy and numeracy.

Various constructs have been used differently in well known and heavily cited studies, e.g. Cockcroft (1982) (*numeracy*); International Adult Literacy Study (IALS) (OECD, 1995) (*quantitative literacy*); Adult Literacy and Lifeskills Survey (ALLS) (2000) (*numeracy*); Programme for International Assessment (PISA), (2000, 2003, 2006, 2009) (*mathematical literacy*).

PISA is used as a vehicle, a kind of prism, to steer a course that looks at issues and attempts to advance the debate on numeracy. It is also harnessed as a source of potentially useful 'insights' that are highlighted in the text.

### PISA and literacy

PISA (OECD, 2009: 13) identifies a key feature driving its development as an:

- Innovative literacy concept, which is concerned with the capacity of students to apply knowledge and skills in key subject areas and to analyse, reason and communicate effectively as they pose, solve and interpret problems in a variety of situations.

Indeed, PISA attempts to assess multiple literacies in the target population including reading literacy, scientific literacy and mathematical literacy.

**Insight 1:** *However acquired, literacy (mathematical literacy or numeracy) is a personal capacity or competence.*

The recent PISA results may be seen as the proximate cause of current actions regarding numeracy, but a longstanding underlying concern for the quality of mathematics education in our schools must also be factored in as a powerful motive. It is interesting to note that PISA



says nothing of numeracy; instead it purports to assess the mathematical literacy of 15 year olds in the context of preparing them for the move into the adult world of work.

To be more precise, it attempts to measure the efficacy of mathematics curricula in participating countries to prepare 15 year olds in those countries for the adult world of work using a special purpose-built theoretical construct called 'mathematical literacy'. For the 15 year olds who were assessed, it measures how well mathematics curricula in previous years prepared these students.

### **The role of the mathematics curriculum in numeracy development**

Clearly PISA posits a role for the mathematics curriculum in developing mathematical literacy. It may be useful to concentrate our efforts on relationships between the *mathematics curriculum* special constructs, e.g. mathematical literacy or numeracy, and results. PISA defines mathematical literacy as:

An individual's capacity to identify and understand the role mathematics plays in the world, to make well-founded mathematical judgements and to engage in mathematics, in ways that meet the needs of that individual's current and future life as a constructive, concerned and reflective citizen.

**Insight 2:** *Mathematical literacy is constructed from mathematics content, processes and skills and involves a range of mathematical competencies e.g. use of mathematical language, mathematical modelling and problem solving skills.*

For our purposes we can represent and highlight the existence of these relationships in a symbolic way:

**PISA: Mathematics curriculum ----- mathematical literacy ----- results**

Now using some licence, we can recast this as follows:

**Debate: Mathematics curriculum ----- numeracy ----- educational outcomes**

This representation should not be interpreted as diminishing the issue of definitions which is very important. We simply cannot equate numeracy with mathematical literacy or with other constructs such as quantitative literacy with impunity without causing confusion or even damage.

It is important to know what the educational target is before an attempt is made to achieve it. Here we are talking about *numeracy* and not *mathematical literacy* as might be expected given the impact of the PISA results. Nor does the focus on numeracy lessen the problem of definitions since there are many definitions of numeracy: for example, Kaye offered 30 collected definitions in a recent workshop (Kaye, 2009). This issue has been surmounted in the current debate by adopting the following definition (DES, 2011):

Numeracy is the capacity, confidence and disposition to use mathematics to meet the demands of learning, school, home, work, community and civic life. This perspective on numeracy emphasises the key role of applications and utility in learning the discipline



of mathematics, and illustrates the way that mathematics contributes to the study of other disciplines.

This definition is accepted uncritically in this paper in order to explore other issues in the time available. But it does raise some interesting questions: Are numeracy and mathematics synonymous? Is numeracy a mathematical capacity? Or is numeracy a supra-mathematics capacity?

**Insight 3:** *Numeracy is a theoretical construct, and it is important to know what it means.*

According to PISA (OECD, 2009: 14) mathematical literacy is:

Concerned with the ability of students to analyse, reason, and communicate ideas effectively as they pose, formulate, solve, and interpret solutions to mathematical problems in a variety of situations.

A student's mathematical literacy is evident in the way he or she uses their mathematical knowledge or skills to solve problems.

PISA implements a three-dimensional framework for assessing mathematical literacy that distinguishes *mathematical content*, *mathematical processes*, and *situations*. PISA holds that mathematical processes are directly related to mathematical competences. For example mathematical competences include modelling and problem solving and many others. These competences are not assessed individually, but are deemed to be evident when students solve problems and apply mathematics in real situations. For this purpose they are grouped into three clusters that are meant to define the type of thinking skills involved in each cluster: reproduction – carrying out routine procedures; connection – making connections and integrating ideas to assist problem solving; reflection – planning solution strategies and implementing them in problem settings (OECD 2003).

While PISA recognises the role of curriculum in student learning, it chooses to deal with mathematical content in terms of four overarching ideas: *quantity*, *space and shape*, *change and relationships*, and *uncertainty*. The situation space is similarly partitioned, but this time into five types of situations: *personal*, *educational*, *occupational*, *public* and *scientific*.

**Insight 4:** *PISA defined the construct they were interested in very carefully. Numeracy needs to be dealt with in the same manner.*

**Insight 5:** *An assessment framework is put in place that recognises mathematical literacy and measures whether it is attained. Similar provision must be made for numeracy.*

**Insight 6:** *The role of mathematics as a discipline in the development of mathematical literacy is recognised. So it should be for numeracy.*

**Insight 7:** *PISA goes to great lengths to integrate constructs, mathematics curriculum and assessment approaches into a coherent structure. Numeracy demands no less commitment and planning.*



### **Mathematics curriculum: expectations and outcomes**

A question that comes to mind as we contemplate PISA results may further this analysis. The question is this: Is it reasonable to expect an existing mathematics curriculum to deliver good/great PISA results? The public expectation seems to suggest a 'yes' response, but the results are not measuring up to expectations. So what has gone wrong and how can it be fixed?

Maybe there is a mismatch between expectations and results, or it may be that the planned outcomes or not consistent with PISA goals. Or could it be that the mathematics curriculum that was in place simply was not up to the task? Using the TIMSS characterisation of curriculum, it was certainly the case that the implemented curriculum (as we knew it) could never lead to outcomes that would see us as a top ranking country in terms of PISA's *mathematical literacy*. The intended curriculum did not aspire to outcomes such as understanding, problem solving and applying mathematics in real life situations, and was driven instead by a concentration on skills and procedures and exam orientation in Junior and Senior cycles.

If we had an opportunity to re-run PISA during those past years using their programme and resources to test for *numeracy* as defined by the DES above, we would get similarly unsatisfactory results. The mathematics curriculum as implemented (primary, Junior and Senior cycles) simply was not capable of delivering numeracy at the level of public expectations. A lesson we can learn and apply from this analysis is that mathematical literacy (or numeracy) is not an accidental by-product of any old mathematics curriculum; it is a planned outcome that must be delivered by an appropriate mathematics curriculum.

**Insight 8:** *Numeracy is a planned outcome not an accidental by-product of curriculum.*

**Insight 9:** *The mathematics curriculum is a vehicle, perhaps the primary vehicle, for delivering numeracy, so it behoves us to ensure that an appropriate mathematics curriculum is in place.*

### **Do we need a numeracy curriculum?**

All mainstream mathematics curricula will strive to deliver much more than numeracy. Mainstream national mathematics curricula should be capable of delivering numeracy for the vast majority of school students as an outcome of their schooling provided they stay in school to the end of the compulsory stage. What is needed is a mathematics curriculum that is capable of developing in students the bundle of mathematical competences that we associate with numeracy and much more. Numeracy demands a considerable range of mathematical competences and is not confined to number concepts and skills.

**Insight 10:** *Numeracy involves developing personal mathematical competences that include a number concepts and skills but is not confined to these alone.*

Age is a factor here and duration of schooling for the student. Very young school children are not usually described as numerate and such an appellation is perhaps inappropriate until the later years of lower secondary schooling e.g. legal school leaving age.

**Insight 11:** *The mathematical competences associated with numeracy need to feature as outcomes in an age appropriate way for all grades and classes.*

The answer to the question posed in the section header is a qualified 'yes'. A mathematics curriculum that has numeracy as a specific outcome and is capable of delivering it is required. A specialist numeracy curriculum with numeracy as the main outcome may be needed for very low attaining students, but should not be restricted to number skills only. The intention to produce numerate students must be backed up by an appropriate curriculum for all students, including aims and learning outcomes, pedagogy, materials and assessment.

### **What competences does the mathematics curriculum need to deliver?**

The reaction to PISA has led to a call for literacy and numeracy – it has not led to a call for a return to basics. This is an important point. The numeracy envisaged in the definition offered in the current debate is far more comprehensive than 'basics' in mathematics, e.g. simple arithmetic and geometric knowledge and skills. It encompasses a comprehensive menu of mathematics knowledge and skills and processes and the ability to use this mathematics in a variety of familiar and unfamiliar situations to solve problems. A numerate person will be well disposed towards using mathematics in real situations and will persevere in its use as a life skill.

**Insight 12:** *A return to 'basics' will not produce numerate students.*

The implied 'lifelong' characteristic of numeracy leads to some interesting considerations. Numeracy as a capacity relates to present and future society and is interpreted in these terms. Thus numeracy will evolve as a competence and is time dependent and technology dependent.

**Insight 13:** *Numeracy is time-dependent.*

### **Numeracy and 'real' world issues**

The 'real' world will always be a formidable challenge for us and includes such interesting places that we know as work places. PISA points us in this direction when it acknowledges the role of curriculum as a preparation for life, education and work. So we should expect numeracy to relate to work places. But there are inherent difficulties here since there is no such thing as a 'generic work' place. All work places are different and place different demands on workers in numeracy terms. This leads to another important educational consideration. If we follow the dictates or requirements of industry and business too closely, then whose numeracy should we pursue, the student's or the employer's? How do we balance these competing demands?

**Insight 14:** *All work places are different and place different demands on workers in numeracy terms.*

### **Essential elements of a national numeracy strategy**

How does this analysis help the current debate? The above analysis and discussion points to a small number of key elements:

- an educational characterisation of numeracy and age-related clusters of learning outcomes
- an appropriate mathematics curriculum capable of generating numeracy as an outcome



- a well-aligned assessment regime (weighted towards assessment for learning especially for young school children)
- teachers capable of delivering the curriculum with a numeracy focus.

These elements are necessary but not sufficient and give us a framework for action. A national strategy needs to be driven and sustained; top-down and bottom-up actions are needed by different actors. The view taken here is that a framework is inert or static while a national strategy must be dynamic. All stakeholders must play their role if it is to succeed over time.

**Insight 15:** *A national numeracy strategy must incorporate a coherent framework that integrates a number of key elements, e.g. a well-defined concept of numeracy, a mathematics curriculum, an assessment regime and well prepared teachers.*

### **An insider's look at the numeracy debate and readiness in the Republic of Ireland**

One can be confident that the key elements have been identified in the current debate. However, a coherent framework integrating key elements and actions has not yet emerged. For example, we are fortunate that there is a mathematics curriculum in place (Primary) or in the process of being put in place (Project Maths/Junior and Senior Cycles) capable of delivering numeracy if concepts, skills and processes that support numeracy development are given sufficient prominence and attention.

It is a formidable challenge in its own right to identify these mathematical components in a way that makes them amenable to teaching and learning and assessment. Numeracy is built on mathematical competences associated with mathematical process skills that have proved difficult to develop and assess. These include mathematical thinking skills, problem solving, modelling and applying mathematics.

Issues such as students' attitudes, beliefs and emotions (Evans, 2003) are also implicated in numeracy development. Traditionally in mathematics education these attributes have not been adequately addressed and are not as well understood as we would like.

While all these issues are important, the major issue is the question of teachers' mathematics knowledge for teaching (MKT) and their ability to teach effectively for numeracy development. A recent study has shown that there is much to be done on MKT front for Primary school teachers in the Republic (Delaney, 2009). In the current debate we should be cognisant of the fact that numeracy is a sophisticated concept that demands more rather than less mathematics.

Similar issues arise at Second level where there is a high proportion of out-of-field teachers of mathematics who are disproportionately deployed at Junior Cycle (Ni Riordain and Hannigan, 2009). However, there is official recognition of this state of affairs and evidence of a determination to deal with it. It is imperative that the mathematical under-preparedness of the teaching force be addressed. Failure to do so will continue to result in poor numeracy outcomes for students. This is an issue for the Teaching Council, DES, and the teacher training institutes and there is reason for optimism in this regard as evidenced by recent official pronouncements and actions.

### Concluding remarks

There is much we can learn from PISA as discussed in the preceding sections, but PISA is not our goal nor should it be. We should work to improve the educational experience of our students in mathematics, science, literacy and numeracy at all levels because that is the educational task that needs to be done. Better educational outcomes will follow if we are successful.

## References

- Cockcroft, W.H. (1982). *Mathematics Counts*. London:HMSO
- Delaney, S. (2010). *Knowing what counts: Irish primary teachers' mathematical knowledge for teaching*. Dublin: Marino Institute of Education and DES.
- DESS (2010). *Better literacy and numeracy for children and young people: A draft national plan to improve literacy and numeracy in schools*. Dublin: DES
- Evans, J. (2000). *Adults' Mathematical Thinking and Emotions: A study of numerate practices*. London: Routledge-Falmer.
- Kaye, D. (2009). Defining numeracy – the story continues. (workshop). 17th International Conference of Adults Learning Mathematics (ALM), Oslo, 28-30 June, 2009.
- Ni Riordain, M and A.Hannigan (2009). *Out-of Field Teaching in Post-primary Mathematics Education: An analysis of the Irish context*. Limerick: NCE-MSTL.
- OECD (2003). *The PISA 2003 Assessment framework: mathematics, reading, science and problem solving knowledge and skills*. Paris: author.
- OECD (2009), *PISA 2009 Assessment framework: Key competencies in reading, mathematics and science*. Paris: author.

## Appendix

### Some numeracy competencies from the Primary syllabus

Applying and problem solving  
Communicating and expressing  
Integrating and connecting  
Reasoning  
Implementing  
Understanding and recalling



## WORKSHOP 1 LITERACY

**Dr Eithne Kennedy**  
**St Patrick's College, Drumcondra**

### **Raising Achievement in Literacy: What matters?**

The question of how best to close the gap in literacy achievement between children in disadvantaged communities and their more advantaged peers has been high on the agenda of governments around the world since the start of the new millennium. While many policies have been implemented (e.g. in Ireland: Delivering Equality of Opportunity in Schools, DES, 2005; National Literacy and Numeracy Strategy, 2011; in the UK: National Literacy Strategy, 1998; in the US: No Child Left Behind, 2001), the goal of closing the gap, on a national level at least, has remained an elusive one (Weir, Archer, O'Flaherty & Gilleece, 2011; DCSF, 2010; Gamse, Bloom, Kemple & Jacob 2008). This paper reports on an intervention in a high-poverty urban junior national school in Dublin which was successful in raising achievement and in raising children's levels of motivation and engagement in literacy (Kennedy, 2008). The lessons from that research have formed the basis of the *Write to Read* project, a St. Patrick's College School and Community partnership project in literacy currently operating in eight disadvantaged schools and after-school clubs in three geographical clusters in Dublin.

The intervention drew on a wide range of international research: on effective literacy teachers (e.g. Pressley et al., 2001a); on schools that had 'beaten the odds' and succeeded in helping the majority of their pupils to perform well in literacy, despite their socio-economic status (e.g. Taylor et al., 1999); on effective professional development for teachers (e.g. Cordingley et al., 2003) and on change models (e.g. Guskey, 2000).

In addition, given that children who struggle with literacy often receive qualitatively different and less motivating instruction to that experienced by more highly-achieving students (e.g. Knapp, 1995; Duke, 2001), the intervention sought to help teachers construct a coherent, systematic and balanced literacy framework suitable for their own school and classroom context. This involved building teachers' content knowledge in literacy – alphabetics, vocabulary, comprehension, fluency, writing (e.g. NICHHD, 2000; Pressley, 2001b), and pedagogical content knowledge (e.g. Shulman, 1987; Pressley et al., 2006) – so that they could respond to the needs of the children in ways that would capitalise on their motivation and engagement (e.g. Guthrie & Anderson, 1999) while also building their metacognitive awareness (e.g. Paris, Lipson & Wixson, 1994) and their agency and creativity (e.g. Grainger et al., 2005). Through customized on-site professional development teachers were supported to gradually construct a 90 minute framework for literacy, to adopt an inquiry-stance (Cochran-Smith & Lytle, 2009) in evaluating the impact of changes to instruction, and to use ongoing formative assessment data to make instructional decisions (Kinnucan-Welsch et al., 2006).

By the end of the study a wide range of successful outcomes was achieved in relation to children, teachers and school and parental involvement. In relation to reading, the numbers of children performing below the 10th percentile on a standardized test of reading achievement were reduced by three quarters, while one fifth were now performing above the 80th percentile (there were no children at this level at the start of the study). Children also made statistically significant gains in both writing and spelling. Teachers attributed the



achievement gains to the changes they had made to their classroom instruction. Teachers reported having higher expectations for the children and higher levels of self-efficacy and confidence in their own ability to address literacy difficulties.

Evidence from parents, teachers, classroom observations, and interviews with the children themselves indicated that the children were now more motivated, engaged, and strategic in their approach to literacy. Teachers reported that parents were now engaging more with the school. Parents noted that children were choosing to read and write both inside and outside school, and this had also had a positive influence on the family as a whole.

This study indicates that while there is much that schools can do, achieving real and sustainable change is complex and occurs as a result of the interaction between a synergy of factors at the home, school and classroom levels. Change takes time, and if education is to become the so called 'great equaliser' then policy should support schools and communities in adopting research-based approaches to literacy instruction through provision of a multi-faceted professional development programme that is not pre-packaged but rather is customised to their needs and which respects their professionalism and autonomy. Such an approach holds much promise for the future.

## References

Cochran-Smith, M., & Lytle, S. L. (2009). *Inquiry as stance. Practitioner research for a new generation*. New York: Teachers' College Press.

Cordingley, P., Bell, M., Rundell, B., & Evans, D. (2003). The impact of collaborative CPD on classroom teaching and learning. In *Research evidence in education library*. London: EPPI-Centre, Social Science Research Unit, Institute of Education, University of London. Retrieved from [www.eppi.ioe.ac.uk/cms](http://www.eppi.ioe.ac.uk/cms)

Department of Education and Skills (DES) (2011). *Literacy and numeracy for learning and life: The national strategy to improve literacy and numeracy among children and young people 2011-2020*. Dublin: Government Publications.

Department of Education and Skills (DES) (2005). *Delivering equality of opportunity in schools*. Dublin: Government Publications

Department for Education and Employment. (DfEE) (1998) *The National Literacy Strategy: framework for teaching*, London: Author.

Department for Children Schools and Families (DCSF) (2010). Statistical first release: Attainment by pupil characteristics in England. Retrieved from the World Wide Web: [www.dcsf.gov.uk](http://www.dcsf.gov.uk)

Duke, N. K. (2001). Print environments and experiences offered to first-grade students in very low- and very high- SES school districts. *Reading Research Quarterly*, 35(4), 456-457.



Gamse, B. C., Bloom, H. S., Kemple, J. J., & Jacob, R.T., (2008). *Reading First Impact Study: Interim Report* (NCEE 2008-4016). Washington, DC: National Center for Education Evaluation and Regional Assistance, Institute of Education Sciences, U.S. Department of Education.

Grainger, T. Goouch, K., & Lambirth, A. (2005). *Creativity and writing, Developing voice and verve in the classroom*. Oxford: Routledge

Guthrie, J. T, & Anderson, E. (1999). Engagement in reading: Processes of motivated, strategic, knowledgeable, social readers. In J. T. Guthrie & D. E. Alvermann (Eds.), *Engaged reading: Processes, practices, and policy implications* (pp.17-45). New York, NY: Teachers College Press.

Guskey, T.R. (2000). *Evaluating professional development*. Thousand Oaks, CA: Corwin Press.

Kennedy, E. (2008). *Improving literacy achievement in a disadvantaged primary school: Empowering classroom teachers through professional development* (Unpublished doctoral dissertation), St. Patrick's College, Dublin.

Kinnucan-Welsch, K., Rosemary, C. A., & Grogan, P. R. (2006). Accountability by design in literacy professional development. *The Reading Teacher*, 59(5), 426-435.

Knapp, M. S. (1995). *Teaching for meaning in high poverty classrooms*. New York, NY: Teachers College Press.

National Institute of Child Health and Human Development. (NICHD). (2000). *Report of the National Reading Panel. Teaching children to read: An evidence-based assessment of the scientific research literature on reading and its implications for reading instruction. Reports of the subgroups* (NIH Publication No. 00-4769). Washington, DC: U.S. Government Printing Office.

No Child Left Behind Act of 2000 PL 107-110. (NCLB). Retrieved February 18, 2011: [www.ed.gov/policy](http://www.ed.gov/policy)

Paris, S. G., Lipson, M. Y. & Wixson, K. K. (1994). Becoming a strategic reader. In R. B. Ruddell, M. R. Ruddell & H. S. Singer (Eds.) *Theoretical Models and Processes of Reading* (pp.788-810). Newark, DE: International Reading Association.

Pressley, M., Allington, R. L., Wharton-McDonald, R., Collins Block, C. & Mandel Morrow, L. (2001a). *Learning to read: Lessons from exemplary first-grade classrooms*. New York, NY: The Guilford Press

Pressley, M. (2001b). *Effective beginning reading instruction: Paper commissioned by the National Reading Conference*. Chicago, IL: National Reading Conference.

Pressley, M. (2006). *Reading instruction that works: The case for balanced literacy instruction* (3rd ed). Guildford Press.

Shulman, L. S. (1987). Knowledge and teaching: Foundations of the new reform. *Harvard Educational Review*, 57(1), 1-22.

Taylor, B., M., Pearson, P. D., Clark, K., & Walpole, S. (1999). *Schools that beat the odds*. CIERA Report #2-006. Ann Arbor, MI: Centre for the Improvement of Early Reading Achievement, University of Michigan School of Education.

Taylor, B. M., Pearson P. D., Peterson, D. S., & Rodriguez, M. C. (2003). Reading growth in high-poverty classrooms: The influence of teacher practices that encourage cognitive engagement in literacy learning. *The Elementary School Journal*, 104(1), 3-28.

Villegas-Reimers, E. (2003). *Teacher professional development: An international review of the evidence*. UNESCO: International Institute for Educational Planning:  
[www.unesco.org.iiep](http://www.unesco.org.iiep).

Weir, S., Archer, P., O'Flaherty, A., & Gilleece, L. (2011). *A report on the first phase of the evaluation of DEIS*. Dublin: Educational Research Centre.

## **Ms Deirdre Robson** **St Mary's University College, Belfast**

### **The Leonardo Effect**

*"They wanted to answer their own questions so they wanted to read."* Primary Teacher

The Leonardo Effect interdisciplinary model for art and science was not developed with literacy as the main focus. However during The Leonardo Effect pilot across the British Isles (funded by NESTA), we asked teachers to record their observations in respect of literacy. We found that through capturing pupils' curiosity, igniting their imaginations and giving them the opportunity to be creative, there were significant benefits for literacy. Schools reported an improvement in literacy standards for boys as well as girls that has been sustainable. Feedback from schools included:

*"Engaged and motivated - improved by two reading levels in a fortnight."*  
Head Teacher

*"They continually showed interest in reading the books and all were able to extract information from the books."* Primary Teacher

*"Because the memories were so fresh and strong in their minds, the quality of the recounts and indeed writing was substantially better from every pupil. Indeed children who normally avoided writing at all costs enjoying writing about what they had experienced."* Primary Teacher

*"I have been very aware that the children's language development has been greatly enhanced. They are also able to use scientific and subject related vocabulary in the correct context and they understand the meaning."* Primary Teacher

*"Sometimes the quality of the discussion was truly amazing."* Teacher



Given its full title of 'Synchronised Integration of Art and Science' in the primary curriculum, the methodology uses Leonardo da Vinci as a role model. Da Vinci utilised his curiosity and through first-hand observation, taking things apart, raising questions and making connections, he explored the world, acquired understanding, developing ideas and applying knowledge. To demonstrate the power of curiosity as a driving force in learning, the SCoTENS presentation included the opportunity for participants to observe live grasshoppers, crickets and other resources.

The Leonardo Effect recognises the multiple access points associated with art that makes learning accessible for pupils of wide ranging abilities. It draws all children into the learning process by acknowledging the importance of human expression to children, developing their self-knowledge and the affective domain. We believe this has been sidelined in western education to the detriment of pupils' self-worth, self-belief and ability to achieve their potential.

The Leonardo Effect is much deeper than a cross-curricular approach because it identifies the commonalities that exist between disciplines, such as observation, experimentation and creative thinking, and building learning around these. It embeds the commonalities in a four stage structure: Gathering Information/Research; Developing Ideas/Experimenting; Creating/Applying Knowledge and Evaluating/Extending; this ensures depth and purpose in pupils' learning. It uses joint learning intentions where appropriate as the mechanism to bring the subjects together. Pupils are given their voice, and in collaboration with teachers, work through the four stages. It is a lesson in how creativity and flexibility when applied in teaching and learning results in pupils exceeding expectations across the curriculum and this includes literacy.

*The Leonardo Effect: Motivating Pupils to Achieve Through Interdisciplinary Learning*, edited by Ivor Hickey and Deirdre Robson (foreword by Mick Waters), will be published by Routledge in July 2012.

## WORKSHOP 2 NUMERACY

**Dr Sean Delaney, Marino Institute of Education, Dublin**

### Learning to Teach Primary School Mathematics

When we discuss how teachers learn to teach mathematics, we first need to be clear about the kind of mathematics teaching that is valued. My vision of mathematics teaching has been shaped by my own experience and by the thoughts of scholars such as Deborah Ball, Constance Kamii, and Magdalene Lampert.

Inspired by Ball (1999), the mathematics teaching that I aspire to takes seriously both mathematics as a discipline and children's mathematical ideas. The discipline of mathematics values practices such as problem solving, reasoning, precision in using notation and language, using definitions and seeking patterns, all of which are consistent with the skills, aims and content of the primary school curriculum. Furthermore, children's ideas can be used by a teacher as 'springboards for inquiry' (Borasi, 1994) and teachers can build on them to help children to develop and refine their mathematical understanding.

Such ideas are consistent with a constructivist view of mathematics learning. Kamii builds on Piaget's work to distinguish three types of knowledge based on their ultimate source: physical knowledge (which is sourced mostly in physical objects such as a cup, which is smooth, hard, red etc.), social-conventional knowledge (which is sourced in human conventions such as driving on the left-hand side of the road and rules about table settings) and logico-mathematical knowledge. Logico-mathematical knowledge consists of mental relationships whose ultimate source is in each individual's mind (Kamii, Lewis, & Kirkland, 2001); it is abstract knowledge that is acquired through thinking and exchanging ideas.

In addition to ideas about mathematics and mathematics learning, the nature of the work of teaching places demands on a teacher and on someone who is learning to teach. Lampert (2001) describes some of the problems of teaching that "exist across social, temporal, and intellectual domains" (p. 2). Teaching unfolds over a year where actions and decisions taken today influence subsequent actions and interactions among students, and how they relate to each other, to the teacher and to the mathematics being taught.

Mathematics teacher educators attempt to prepare future teachers to overcome such problems in order to practice ambitious teaching. But in common with all teacher education, they must deal with the paradox that teaching is a difficult job that looks easy (Labaree, 2000). One key question for educators of pre-service teachers is what do beginning teachers of mathematics need to learn?

Answering this question is difficult. There is a lack of research evidence to support decisions about teacher education in general. Wideen and his colleagues referred to the "isolated nature of research programs that appear to be proceeding in various directions and unconnected ways" (Wideen, Mayer-Smith, & Moon, 1998, p. 168). Much of the research in teacher education is characterised by methodological flaws, is small in scale, consists of much self-study and is poorly funded. In Ireland, of 18 articles published in *Irish Educational Studies* in 2010, none had 'teacher education' in the title or listed as a keyword. Finally, even the research that is available is frequently not consulted (Zeichner, 2005).



Little consensus exists about what a beginning teacher should be able to do. In a blog entry (<http://seandelaney.com/2011/07/20/finger-on-the-pulse/#more-111>), I included the following on my list of priorities for beginning teachers. They should be able to:

1. Ensure a safe environment for the children in the class
2. Know at least as much content as the children are expected to learn
3. Identify gaps in each child's literacy and numeracy levels
4. Know what children are expected to know in a given subject at a given grade level
5. Explain ideas/concepts in the curriculum subjects being taught
6. Anticipate difficulties that children have in learning particular concepts
7. Identify gaps in each child's subject knowledge and skills
8. Recognise when to call on the professional support of colleagues
9. Recognise when to call on the professional support of other professionals
10. Establish classroom procedures and maintain order in the classroom
11. Lead a class discussion
12. Plan for teaching
13. Justify the reasons for choosing particular teaching materials
14. Justify the reasons for choosing particular teaching strategies
15. Evaluate and modify teaching resources (including those on the Internet)
16. Document clearly and precisely what is taught
17. Assess and record what children learn
18. Write a school report that recognises a child's achievement and identifies scope for development
19. Respond to a parent's questions about teaching
20. Expand children's horizons in at least one area

Ball and Forzani (2009) identify 'high leverage practices' that beginning teachers need to master. These are "tasks and activities that are essential for skilful beginning teachers to understand, take responsibility for, and be prepared to carry out in order to enact their core instructional responsibilities" (p. 504). Among the high leverage practices identified by Ball are making content explicit through explanation, modelling, representations and examples; eliciting and interpreting individual students' thinking; and designing a sequence of lessons toward a specific learning goal (<http://www.teachingworks.org/work-of-teaching/high-leverage-practices>).

Another area of Ball's research is mathematical knowledge for teaching (MKT), a theory about the mathematical knowledge that teachers need in order to implement such high leverage practices in mathematics teaching. Ball and her colleagues believe that the mathematical knowledge needed by teachers is not advanced university mathematics. Nor do teachers need just school mathematics (or what Ball calls common content knowledge), but a special combination of knowledge of such mathematics along with specialised content knowledge, knowledge of content and students, and knowledge of content and teaching (Ball, Thames, & Phelps, 2008).



$$\begin{array}{r} 35 \\ \times 25 \\ \hline 875 \end{array}$$

Figure 1a

$$\begin{array}{r} 35 \\ \times 25 \\ \hline 255 \\ + 800 \\ \hline 1055 \end{array}$$

Figure 1b

In Figure 1a a student has solved a multiplication problem. Ball offers this as an example of common content knowledge. But in Figure 1b a student has solved the problem incorrectly. It is not enough for a teacher to know that the problem is wrong; the teacher must be able to use MKT to mathematically analyse the incorrect answer to diagnose the source of the error and help the pupil correct it. In order to get a better understanding of teachers' MKT, Ball and her research team developed multiple choice questions that could be used to measure the mathematical knowledge of large numbers of teachers.

I adapted some of Ball's measures and administered a survey to over 500 teachers in Ireland (Delaney, 2010). Among the key findings was the fact that substantial variation exists among Irish teachers in terms of their MKT. Although many teachers bring a good deal of MKT to enhance their teaching of mathematics, many teachers hold less of this resource, suggesting that Irish teachers are not being systematically equipped with such knowledge. Teachers generally showed strength in the area of identifying and classifying pupils' mistakes, in graphically representing fractions, and in algebra. More difficult areas for Irish teachers are applying definitions and properties of shapes, identifying and applying properties of numbers and operations, in attending to explanations and evaluating pupils' understanding.

Addressing the variability among Irish teachers' MKT will require multiple strategies. I would suggest considering the following. First, teaching needs to be perceived by policymakers, by teachers and by prospective teachers as work that is mathematically demanding. Second, mathematics content courses should be required as part of teachers' initial teacher education programmes. Third, design, provide and evaluate professional development in mathematics that is based on the practice of teaching - including opportunities for teachers' to develop their MKT. Some of this professional development could be offered online. Fourth, mathematics textbooks and teacher manuals could be used to support teachers' MKT and a more proactive approach needs to be taken by policymakers in relation to the quality of textbooks and manuals. Fifth, the possibility of appointing mathematics specialists in schools should be considered. Finally, parents need to be involved in any changes to mathematics teaching so that they understand why changes are being made.

## References

- Ball, D. L. (1999). Crossing boundaries to examine the mathematics entailed in elementary teaching. *Contemporary Mathematics*, 243, 15-36.
- Ball, D. L., & Forzani, F. M. (2009). The work of teaching and the challenge for teacher education. *Journal of Teacher Education*, 60, 497-511.



Ball, D. L., Thames, M. H., & Phelps, G. (2008). Content knowledge for teaching: What makes it special? *Journal of Teacher Education*, 59(5), 389-407.

Borasi, R. (1994). Capitalizing on errors as 'Springboards for Inquiry': A teaching experiment. *Journal for Research in Mathematics Education*, 25(2), 166-208.

Delaney, S. (2010). Knowing what counts: Irish primary teachers' mathematical knowledge for teaching. Dublin.

Kamii, C., Lewis, B. A., & Kirkland, L. (2001). Manipulatives: when are they useful? *Journal of Mathematical Behavior*, 20, 21-31.

Labaree, D. F. (2000). On the nature of teaching and teacher education: Difficult practices that look easy. *Journal of Teacher Education*, 51(3), 228-233.

Lampert, M. (2001). *Teaching problems and the problems of teaching*. New Haven, Connecticut: Yale University Press.

Wideen, M., Mayer-Smith, J., & Moon, B. (1998). A critical analysis of the research on learning to teach: Making the case for an ecological perspective on inquiry. *Review of Educational Research*, 68, No. 2, 130-178.

Zeichner, K. M. (2005). A research agenda for teacher education. In M. Cochran-Smith & K. M. Zeichner (Eds.), *Studying teacher education: The report of the AERA panel on research and teacher education* (pp. 737-759). Mahwah, NJ: Lawrence Erlbaum Associates, Inc., Publishers for the American Educational Research Association.

## WORKSHOP 3 LITERACY

**Ms Michele Long**  
**University of Ulster**

**Dr Brian Murphy**  
**University College Cork**

### **Contemporary Issues for Literacy Teacher Educators North & South: Policy and Practice**

This presentation – entitled ‘Contemporary Issues for Literacy Teacher Educators North & South: Policy and Practice’ – was the second literacy input of the opening afternoon of the conference. It focussed on key current national and international policy and practice issues for literacy teacher educators in both jurisdictions. The session was well attended and well received and stimulated some considerable discussion at the subsequent plenary feedback session.

The session began by isolating three key broad issues of concern with respect to the context and practice of literacy development in schools. The first of these concerned the current conceptualisation of literacy and literacy development espoused in the current policy contexts, which appears to place emphasis on the narrow development of literacy skills coupled with an increased emphasis on literacy assessment in the form of standardised testing. Reference was made in this light to the recently published National Literacy and Numeracy Strategy (DES, 2011) in the South as an illustrative example of the current policy context with respect to literacy.

The second issue of broad concern for literacy educators focussed on what were classified as key challenges with respect to literacy development in schools which have emerged from recent local, national and international research conducted with classroom teachers at primary and post-primary levels. Discussion here focussed on core issues such as the personal literacy competence of student teachers, the persistence of a simple view of reading (Gough & Tunmer, 1986) in primary classrooms, and the perceptions of literacy and perceived responsibility for literacy development at post-primary level.

The third and overarching issue focussed on the need for radical changes in the culture, provision and organisation of continuing professional development in literacy education for all teachers to cater for this complex and rapidly evolving literacy context. It was outlined that such a change would need to reflect a more local, school and needs-based approach to literacy curriculum development, and explicit reference was made to the ‘mutual adaptation’ perspective on curriculum change (Jackson, 1992) in this light.

The presentation concluded with recognition of the significant challenges which lay ahead in addressing the identified issues, while also calling for action by all stakeholders in recognition of the centrality of literacy to the subsequent educational and life opportunities of all our young people.



## WORKSHOP 4 NUMERACY

**Dr Aisling Leavy**

**Mary Immaculate College, Limerick**

**Mr Jim Mullan**

**Queen's University Belfast**

### **Promoting Literacy and Numeracy through Teacher Education**

#### **Northern Ireland**

This section involved an examination of the objectives and key elements of the Northern Ireland Curriculum (Key Stage 3). This was followed by a brief examination of the expectations for Initial Teacher Education (ITE) as communicated in '*Count Read: Succeed - A Strategy for Improving Outcomes in Literacy and Numeracy*'. Two activities then followed:

Activity 1: Error Analysis of Mathematics

Activity 2: Discussion of comments in recent inspection reports on ITE

#### **Southern Ireland**

This section started with an overview of efforts to address literacy and numeracy in the South with particular emphasis on ITE. Specific references were made to the publication by the DES in November 2010 of the *Draft National Plan to Improve Literacy and Numeracy in schools* followed by the publication in July 2011 of the *National Strategy to Improve Literacy and Numeracy among Children and Young people*. Running somewhat parallel to the DES efforts to address numeracy was the spotlight placed by the Teaching Council on numeracy and literacy, culminating in the publication of the *Initial Teacher Education: Criteria and Guidelines for Programme Providers*.

This overview was used to frame the question of 'How can teacher educators prepare teachers to improve numeracy?' Exploration of this question was supported by examination of a piece of classroom video of primary children engaging in a lesson on data (as part of Japanese Lesson Study work carried out at Mary Immaculate College). Theoretical Frameworks of Teacher Knowledge (Shulman 1986; Ball et al., 2008) were used to structure the analysis of classroom video and explore the types of knowledge needed to (a) Identify the source of the errors and misconceptions that arose, and (b) Construct questions/probes that guide children to constructing understanding.

## WHY TEACHERS MUST KNOW ABOUT MORE THAN PHONICS TO TEACH ENGLISH LITERACY

### Professor Terezinha Nunes

**Professor of Educational Studies, University of Oxford**



Thank you for inviting me to be here today. I have certainly learned from being here yesterday and enjoyed the presentations. I won't actually talk about children who are challenged in particular – I am going to look at research with typically developed children.

I am very aware of the fact that education moves forward by relying on different bases, which include best practice, excellence in leadership and good policies, all of which are essential for the progress of education. These are not the domains of my activity. What I do is much simpler and much more focused – I work in research. I have the privilege of sitting with children and listening to them, trying out materials and seeing how they work, reading their writing and listening to them read specially selected words – just to help research. What I am going to be talking about is the product of this kind of work.

I suggest that we need to think about literacy learning in a broad way. Perfetti uses a good definition. He says: "The children's task is to figure out what is the relationship between the language they speak and the written language that they have to learn". And of course for different children this challenge can be different, even if they are learning the same language, because they may speak the same language in different ways. We all know, for example, that in the context of learning to read and write English Afro-American children have huge difficulties – but of course they do, because the form of the language they speak is much further away from the form of the language that they write than the form of the language that children who speak Standard American English is. This is a fascinating aspect of literacy which unfortunately I cannot talk about today, but it is an aspect that we are starting to understand now much better than in the past.

What I am going to focus on today is the fact that there are two connections between oral and written language and both of these connections help us to understand the differences between the way children in different parts of the world speak English and the fact that they have to write the same written language. One of these connections is through the surface of oral language and the surface of written language; if you know the signs for the notation – that is the letters – and what they represent, you can understand the notation system.

But there is also an indirect connection between oral and written language, which works through syntax and morphemes. It works through the meanings that are represented in the language in many different ways. The significance of syntax is quite easy to understand. We know that the sentences '*the dog chased the boy*' and '*the boy chased the dog*' have exactly the same words, but have different meanings. These meanings are not the outcome of the notation system, they are conveyed through syntax in English, a language in which word order is very important. But we need to think also of more subtle differences between sentences, like '*I visit my parents on Sundays*' and '*I visited my parents on Sunday*'. These sentences also have different meanings and the difference is conveyed in a much subtler



way: the syntactic difference is conveyed by two morphemes, the 'S' and the end of 'Sunday' in the first sentence and the 'ed' at the end of 'visit' in the second sentence.

Morphemes are units of meaning that form words. The word 'Sundays' has an extra morpheme compared to 'Sunday' because it has the 'S' that indicates plural, i.e. means more than one. The word 'visited' has an extra morpheme when compared to 'visit' because it has the 'ed' ending, that signifies past tense. Morphemes are units of meaning that have a fixed form in English orthography. Venezky refers to this as the visual identity of meaning parts: a morpheme doesn't normally change its form when you add a suffix to it, even when it changes its pronunciation. Think, for example, of the words 'magic' and 'magician': the pronunciation of the first vowel, 'A', and the last letter, 'C', change but the spelling of the stem, magic, does not.

The direct connection between oral and written language is very easy to understand for most people. The processes involved in reading and spelling by using letter-sound correspondences are called 'bottom up'; the literacy instruction that relates to the 'bottom up' processes is phonics. The indirect connection works differently, because it works through the deep structure of the language, and it is less often acknowledged; it is called 'top down' because it goes from the meaning of words and sentences to the detail of the letters used in writing words.

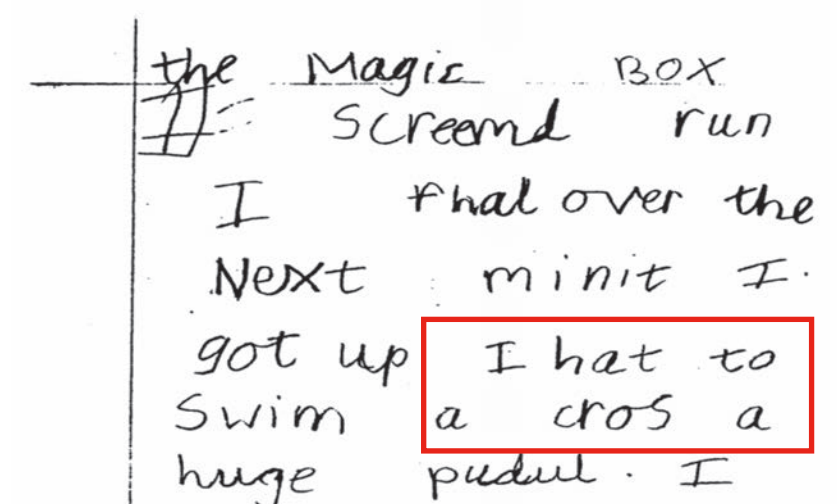
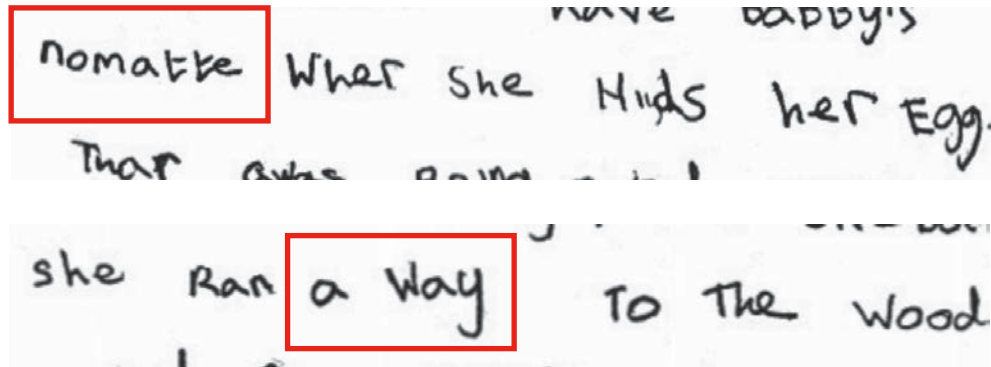
The literacy approach in England is said to be based on the Simple View of Reading, but it actually does not represent fully the Simple View of Reading, because it is basically a bottom-up approach, whereas the Simple View of Reading acknowledges the significance of both processes. I am quoting from Hoover and Gough who first wrote about the Simple View of Reading as a model, and they say: "The 'bottom up' conception holds that reading is a serial process with coding preceeding comprehension – with this view the coding should take place before and therefore independently of comprehension, and it should not be influenced by things taking place at any higher levels, yet word recognition can be dramatically influenced by linguistic contexts and this falsifies the strictly 'bottom up' model." The point that I am trying to make is that you can go a little too far with the emphasis on the 'bottom up' processes because even the proponents of the Simple View of Reading, which is the basis of the literacy strategy in England, recognise the importance of meaning for word reading.

What I want to explore with you today is how the indirect connection affects literacy. I want to present to you some evidence on five different aspects of how the indirect connection between oral and written language affects literacy – in the establishment of word boundaries, in spelling, in vocabulary learning, in reading fluency and in reading comprehension. I think this demonstrates a very widespread influence of this indirect connection on children's reading ability.

Let's think about segmenting sentences into words. Words are not phonological units, they are morpho-syntactic units. When we talk we say 'I wento' but actually we have to write 'I went to'. We say 'I hato' – the 'D' in the word 'had' disappears. But children have to discover that words are conserved across phonological contexts, they don't lose their identity. Children seem to learn word boundaries implicitly, through literacy instruction; children are not very good at counting words in sentences before they start to read and write. I think it is amazing how well they do it, but the few errors that they make remind us that word



boundaries are not obvious. If you look at these children's writing, we have a few interesting mistakes in word boundaries but the success in finding them is actually amazing.



These productions show the children trying to figure out a puzzle: how we segment sentences into words – on their own, because nobody actually tells children where word boundaries are. I am glad we don't try because it is jolly difficult to explain what a word is, and it would probably be very difficult to teach this, if we had to do it. Children actually have to learn word boundaries and they seem to learn this implicitly. I won't dwell on this because children seem to figure out relatively easily where word boundaries go – the point here is that word boundaries, which are marked in spelling, are not determined by phonology but by syntactic and morphological units.

Now let's think of the second aspect that I mentioned (of five) – and this is something we know how to teach, spelling. Some words that have the same end sounds in English have different spellings. For example, 'fox' and 'socks' end with exactly the same sounds, but 'socks' is a two morpheme word – it is made of 'sock' plus the 'S', so the spelling 'sock' is maintained, and we add the 'S' because there are two morphemes in 'socks'. But 'fox' is a one morpheme word, so it is not spelled like a two morpheme word. This is amazingly consistent in English: these end sounds /ks/ most of the time, are spelled with 'X' if the word is a singular noun, and if it is a plural noun you write the singular form and then add

*5 The use of two slashes indicates that the sounds of the words or parts of the words are being represented, not their spellings.*



the 'S'. Of course you have words like mathematics and physics, which used to be plural and now are singular, but their spellings did not change. English spelling carries history in it.

Let's think of another pair of words, '*magician*' and '*confession*', which you really can't spell correctly unless you know something about morphemes. Think about the sounds in the word '*magician*', what sort of vowel is in the syllable '*ma*'? It is not a clear vowel, it is a schwa vowel, so it is difficult for children to know which vowel to use here. If you try to transcribe the sounds in the word '*magician*', the end of this word /shun/ is quite difficult to write, but if you understand that it is made of '*magic*' plus '*ian*' which forms agents, or 'person words' as children say, then you know how to spell '*magician*' without having to know anything else. And why is '*magician*' spelt with '*ian*' '*confession*' spelt with '*ion*'? Because '*ion*' is a suffix used to form abstract nouns and '*ian*' is a suffix used to form agents. You may think these examples are not important, but English spelling does represent phonemes and morphemes. If children don't have an insight into the dual representation in English spelling, they find many common and absolutely regular words difficult to spell.

It is discouraging to think that the majority of nine year olds in England cannot spell the word '*electrician*'. They spell the word '*electrician*' more often with '*ion*' than with '*ian*' at the end – yet this is something so simple, which children can learn. This result was observed in a study with about 7,000 children who participated in the Avon longitudinal study of parents and children, called ALSPAC. Why did the children use '*ion*' more often to spell electrician than '*ian*'? Probably because they didn't know how to make the right choice and '*ion*' is a more frequent suffix in English than '*ian*', so they were implicitly influenced by what they had seen more often as word ending before.

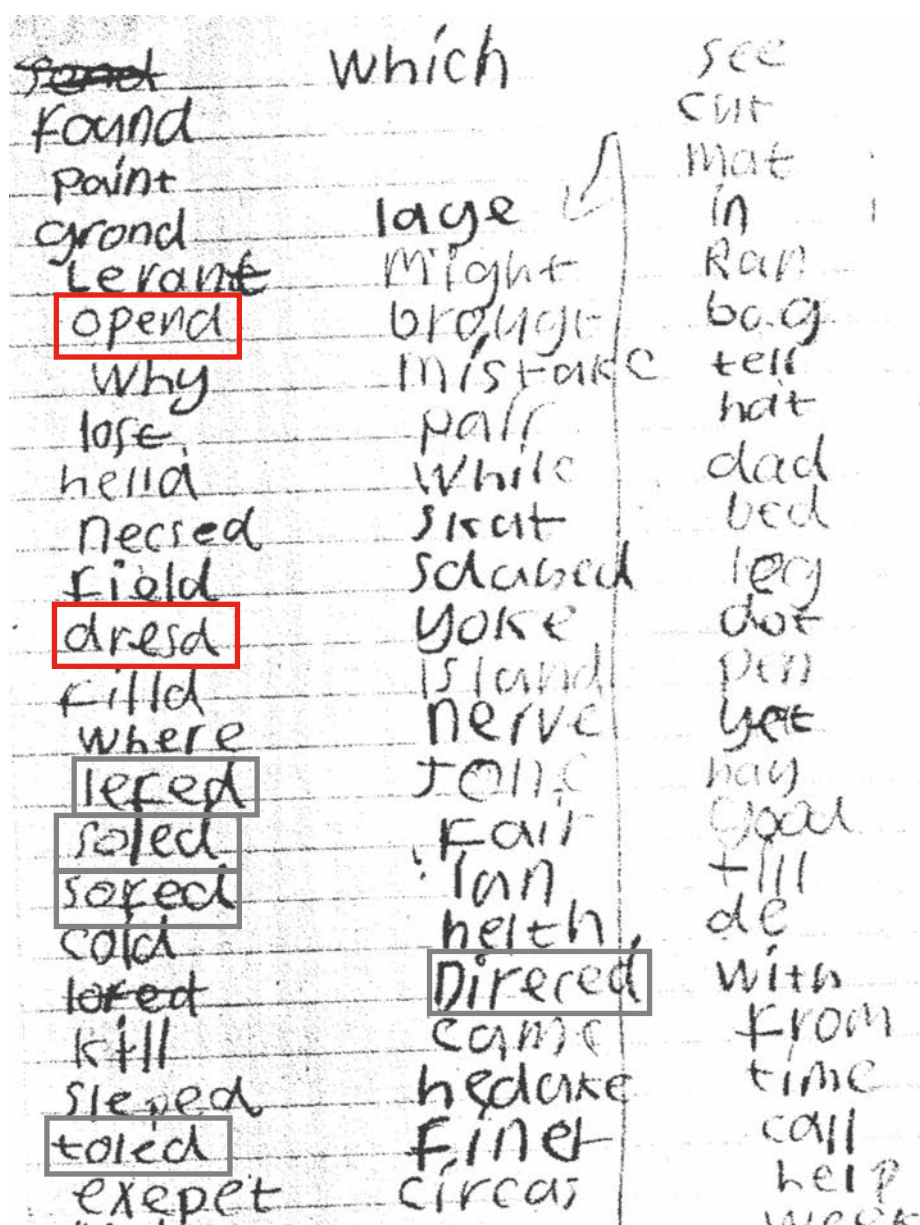
I've talked about words that have the same end sound and are spelled differently. There are also other words that have different sounds but are spelled in the same way. Verbs in the past are an important example: '*kissed*' and '*opened*', for example, end in different sounds: '*kissed*' ends with a /t/ sound and '*opened*' ends with a /d/ sound, but they are spelled in the same way because they end with the same morpheme. All of these spelling difficulties can be solved with reference to a morphological description of the word.

Many researchers who have focussed on phonics and teachers as well have assumed that words that are not regular in terms of letter-sound correspondence have to be memorised on a word by word basis. I want to suggest that this is not the best way of teaching children how to spell words – there are better ways to learn many words than attempting to memorise their spellings.

Let me tell a little story about this. The first time I became interested in morphemes and spelling was a very long time ago, when my son was 8 years old, and he got home and threw his school books onto the table and said "I am never going back to school again". I thought, that sounds serious, so let's see what the problem is. I asked "Why?", and he said: "Look at this, the teacher gave me this list of 100 words to memorise, I need to memorise the spelling of these words by tomorrow, and this is impossible". I thought, well that sounds a bit tough, so I said: "Can I study your list and see if we can do that in a better way?" The list was basically words that have 'S' or 'Z' between vowels: the 'S' and the 'Z' can be both used in Portuguese to spell the /z/ sound between vowels, and my son's teacher assumed that there is no way we can know how to spell these words unless we memorise them one by one.

But I studied the list that she had produced and figured out that, if he knew 3 morphological rules, he could get 80% of the words correct. So I said "OK, if you work with me and I promise you that you can get 80% of these words correct, I am happy with that – are you happy with that?" and he said "yes". We worked on the morphological rules for spelling Portuguese, the difference between using 'S' and 'Z'; he became much more interested in spelling, because he thought that taking apart words, and thinking about how words worked, was not all that bad, but memorising them was terrible.

Then I wrote a little note for his teacher saying "I think there is a better way to teach this. If you don't mind, I can make a suggestion". The teacher was a bit miffed, but she allowed me to come in and work with her children, and I think we were all a lot happier after that. That was before I came to England. When I came to England and my daughter spelled 'kissed' with 'T', I thought, let's work on that one now. That is how I became interested in the spelling of the past tense and of plurals.

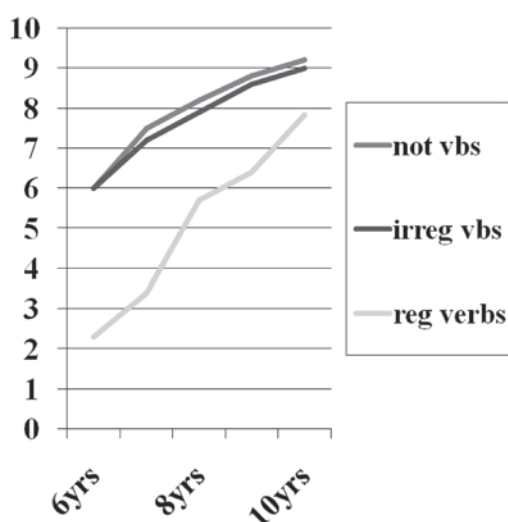




Now what I want to present to you evidence from three kinds of studies – longitudinal, correlational and intervention studies – all of which show that knowing about morphemes pays off in spelling, in vocabulary learning, in reading fluency and in reading comprehension.

In the longitudinal study we looked at how children decide which words that end in /t/ and /d/ sounds are spelled with 'ed' and which ones are not. The decision is quite simple: they are spelled with 'ed' if they are regular past verbs and they are not spelled with 'ed' if they are not regular past verbs – it is as simple as that. *Soft*, which is not a verb, shouldn't be spelled with 'ed', and *'kissed'*, which is a regular verb in the past, should be spelled with 'ed'. *'Felt'* demands more thought: it is a past verb but it is not regular, so it should not be spelled with 'ed'. If you look at these spellings (below), you can see the production of a child who is rather confused. He uses 'ed' when he should and also when he should not, and he also fails to use 'ed' when he should. It can seem terribly arbitrary, but it is not, and there is no reason why the children should have to figure this out by themselves, while believing all along that all they need to know in order to spell is letter-sound correspondences.

How can we help children understand that? Unfortunately, this is not all that simple. As adults we think this is quite obvious, but there are many concepts that children need to learn in order to understand the idea of a regular past verb. The curves in the figure below show how children spell non-verbs and irregular verbs, which are spelled phonetically, and regular past verbs which are not.



It is easy to see that it takes them a long time for the children to attain a better performance in regular past verbs; 10 year olds are only getting an average of 80% correct. But there is no reason for that – they could be doing better. The question really is whether the non-phonetic endings should be learned by rote, committing each word to memory one by one, or do children use their knowledge of morphology to generate the non-phonetic spellings? The curve that describes the children's learning is much more similar to what happens when children learn spellings by rote: learning improves slowly over a long period of time. The curve suggests that this is how most children are learning, when they are not being taught about morphemes. But a learning curve for many children covers up individual differences.



It could be the case that many children are competent spellers of 'ed' endings and others are not at all, and that the competent children are those who have some insight into how morphemes affect English spelling. If the number of children who attain this insight and become competent increases over time, whereas other children continue to do quite badly, the overall learning curve shows a slow overall increase.

So what evidence is there to suggest that children can improve their spelling from learning about morphemes? We gave the children tests of what we call morpho-syntactic awareness, which is a measure of how aware they are of morphemes and syntax. Morpho-syntactic awareness is a big word, but you cannot really separate morphology from syntax because morphology is entirely bound up with syntax. As exemplified in the case of 'ed' spelling, you need to know whether the word is a verb or not in order to use the 'ed' correctly, and word classes are part of syntax. In research we often say 'measures of morphological awareness', but this does not mean that syntax is not involved in the measures.

These are big words, but the tests are very simple. We use puppets: one puppet says '*Tom helps Mary*', and the other one says '*Tom helped Mary*'. The child is asked to help the second puppet with the next sentence. When the first puppet says '*Tom sees Mary*', the child has to help this puppet find the right thing to say. Now if you choose the verbs carefully, the child won't be following the phonological transformation; the child has to understand the change in meaning and make the same change to the second sentence. The transformation here is from present to past, and the child needs to make the same transformation to the sentence, from present to past here.

We also use a word analogy task, which again we give with puppets. When one puppet says '*teacher*', the other one says '*taught*'. Then the first puppet says '*writer*', and the child has to help the second puppet find the right word. In order to make the analogies, the children must think about the transformation in the first pair and make the analogous transformation to create the second pair.

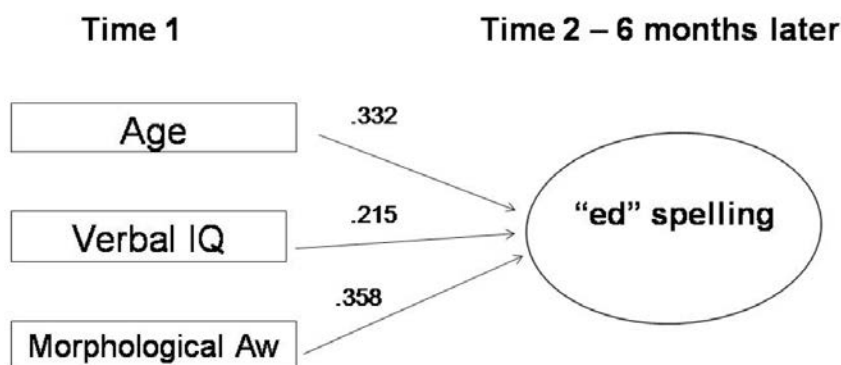
I want to turn now to the results of the longitudinal studies and show how measures of awareness of morphology predict children's success in different tasks. I will go through the first set of results in detail because then the next ones will be similar, so if you understand the first one, the other will be quite easy. When we look at the importance of morphology for predicting something – for example children's spelling – we run statistical models which allow us to predict the children's success, but in order for us to say that this is really due to awareness of morphology, we have to separate out what morphology has in common with spelling, as well as other factors such as age and general ability. As children grow older, they get better at spelling and they also get better in morphological awareness, so we have to account for the importance of age in the analysis. When you look at this graph, it shows that age explains about 19% of the individual differences in children's success in spelling.

We also have to look at verbal intelligence because, like age, it is another factor that relates to awareness of morphology and to the children's spelling. If morphological awareness is important for children's spelling, we need to control for the effect of intelligence when making the predictions.

Controlling for intelligence is a very important statistical move for educational research. Why is it such an important statistical move? In an analysis that controls for intelligence, the



## Morphological awareness as the basis for “ed” learning



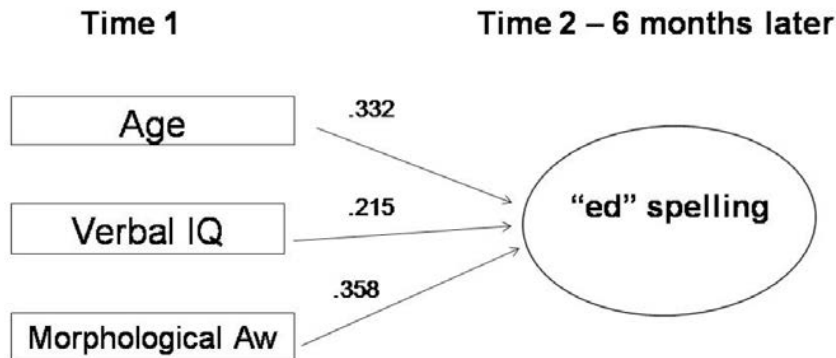
results show that children with the same level of intelligence, as measured by tests, still differ in spelling, and these differences are related to their awareness of morphology. This is a clear result, shown in the graph. After controlling for age and intelligence, children’s awareness of morphology still explains a significant percentage of variation between children in spelling ability. When we have a result like this, a teacher can’t say: “Well, this child spells better because the child is more intelligent, and that child spells less well because that child is less intelligent, and I can’t do anything about the children’s intelligence”. The analysis shows that morphological awareness continues to be important after we control for intelligence, so we can say to the teacher: “OK, forget about the children’s intelligence, do something about what you can influence, because you can promote the children’s morphological awareness”.

We do two kinds of analysis. The results of the first one are in the bar chart above. It aims to answer the question: does morphological awareness explain variance in children’s spelling independently of age and intelligence, which we can’t really change in the classroom? The answer is ‘yes’, as we see in the bar chart. The second analysis answers the question: when you look at all of these factors in a predictive equation, which one comes out as the most important? This is assessed by what is called the Beta value, which is a value that varies between – 1 and +1. 0 would be the value that it takes if there is no relationship between the predictor and the outcome. If there is a connection between the predictor and the outcome, the bigger the value is, the stronger the connection. The largest value you can have is 1. So if we look at the three values in the figure below, the great surprise is that the children’s morphological awareness is more important for predicting how well they learn to use the ‘ed’ spelling than the level of their intelligence.

In fact, age is also more important, and the most likely explanation for this is that the older children are at a more advanced year group in school than the younger children, and have learned more about spelling.



## Morphological awareness as the basis for “ed” learning



This is a very important message for teachers, because we can do something about morphological awareness, and if we promote the children’s awareness of morphology, we also promote their spelling ability. There are two important conclusions from a study like this. The first is that some words seem irregular from the letter-sound correspondence perspective, but are not actually irregular, because their spellings are based on morphological awareness. The second is that the children don’t have to memorise these words one by one: they can learn a general approach to how to spell these words, and if they learn that approach, that predicts that they will be better spellers.

I want to move on to intervention studies, which show how we can promote children’s morphological awareness. But before the intervention studies, I want to say one more thing about morphological awareness. Are we justified in using the expression *morphological awareness* or should we say something more specific, like learning to use the ‘ed’ in spelling? I think that there is a large set of spellings in the English language that depend on morphology, and although the spellings themselves are very different, children can think of them as all interconnected if they become aware of morphemes. If this is true, we can actually help children make progress in the whole array of spellings instead of just one set of spelling rules. Let’s look then at research that tells us whether the ‘ed’ spelling is something very specific or whether it relates to a more general ability.

Think of the words ‘*know*’ and ‘*knowledge*’. If children are not aware of morphology, and are not aware of the connection between these two words, they might memorise the spelling of ‘*know*’ but still have no any idea how to spell ‘*knowledge*’; after all, these two words don’t even sound similar. But if they have some awareness of morphemes and realise that there is a link between these two words, that ‘*knowledge*’ is a word that comes from ‘*know*’, and when they learn to use a ‘K’ at the start of ‘*know*’, they will use it also at the beginning of the word ‘*knowledge*’. Consistency in spelling the stems of words is another aspect of awareness of morphology. The question then is: is there a relationship between children’s awareness of the consistency in the spelling of stems and their awareness of the spelling of suffixes? These might seem very different spellings to memorise, but if they are not actually memorised, but understood because of their relation to morphology, then there should be a connection between how well children use the ‘ed’ in spelling and how well they conserve the stems in words.



In order to make the task of consistency of stems more interesting, we asked the children to spell names of dinosaurs. We showed them some pictures, and asked them to spell the name of the dinosaur, which was fictitious and which we dictated to them. If I asked you to spell the name of the dinosaurs in the picture, and told you they were called '*halfosaurus*' and '*swordosaurus*', how would you spell their names? '*Half*' is an irregular word and '*sword*' has an unpronounced '*W*' in the middle, but you would probably spell these words in the same way as I just did, because you would see the connection in meaning between the stems of '*half*' and '*halfosaurus*' and of '*sword*' and '*swordosaurus*'.



We use made-up words in research, which are technically called '*pseudo-words*', in order to make sure that the children had not seen any of these spellings before, so they could not have memorised them. We asked them to spell the real words on one day and the dinosaur names on another day. We looked at their consistency in spelling stems and also at their ability to use the '*ed*' spelling correctly and assessed whether these two abilities were correlated, after controlling for age and verbal intelligence. We found a strong relation between the children's ability to use the '*ed*' correctly and their consistency in spelling the stems in the dinosaur task, which was equal to .55. That means that the children seem to be using their knowledge of morphology from learning English in order to learn to spell both types of words.

I want to move on to the third aspect of literacy that I suggested relates to morphology: vocabulary. Vocabulary is a predictor of word reading and comprehension in English. But much more important than this is the fact that written language uses tens of thousands of words more than oral language, and this means that children must be able to read and interpret words that they have never heard. That is a very tall order for children's literacy development. Our hypothesis is that children's knowledge of morphology would be very helpful to them when they came across written words that they have never encountered in oral language. So what we did was to think about what children need to do when they encounter new words.

Many new words in a language are not invented entirely from scratch. Many new words are generated from words that already exist in the language, like '*skyscrapers*' and '*motor-racing*', which are rather new words in comparison with the age of the English language

– these are compound words, because they are formed with two words. Other new words are created by inflection or derivation from words that exist in the language, like ‘computers’ and ‘infectious’. So when new words come into a language, we need to remember the sequence of sounds that compose them, and we also need to give them meaning. If they are related to words that we already know, we can have a good guess at what they mean without having to ask.

The same is true of children. When children they come across a new word in a written text, they have to do two things: they have to remember the word’s sequence of sounds, and they have to figure out the meaning of the word. Our hypothesis was that their awareness of morphology would help them with both of these tasks.

There is some research on what predicts how well children remember the sounds of new words. In order to make sure that the children have never really heard the words, the stimuli used in this research are pseudo-words. This research shows that children’s phonological short term memory is an important factor in determining how well children can repeat these non-words. This work was mostly carried out by Sue Gathercole and her colleagues. The non-words that she used in her research were stimuli like ‘woogalamic’, ‘hampent’, ‘stopograttic’ and ‘dopelate’, which are sequences of sounds that are not composed with morphemes, as many new words in a language are. The learner doesn’t have a way of approaching these pseudo-words beyond attempting to memorise them. But it is a very old finding in memory research in psychology that, when we learn stimuli that have meaning, we don’t use exactly the same processes that we use when we learn stimuli that don’t have meaning. So we decided to use the Gathercole technique of non-word repetition but to create non-words that were made with morphemes in new combinations. We used words like ‘concentrationist’, ‘unsausagish’, ‘winteriser’, and ‘computerist’ – these are all non-words, but you can learn them by establishing a meaningful connection between their morphemes. If I asked you what a ‘concentrationist’ would be, if it were a word, you could actually tell me what it is.

We created a list like this and we compared how children performed in our list, compared to Sue Gathercole’s list. Repetition of the words in her list is influenced by short term memory, but we expected that the children would be able to repeat non-words in on our list better than the items from her list. We also expected that their morphological awareness would be a predictor of how many items from our list they could remember, but would not predict how many items in the Gathercole’s list they would repeat. We matched our non-words to her non-words by the number of syllables. The reason we predict that the children will remember more items from our list is that they have to remember fewer units. ‘Computerist’ has four syllables but three morphemes, so if they are using morphemes to remember they actually have fewer things to remember. We also expected that there would be a strong correlation between children’s ability to repeat items from both lists because they both depend on short term memory.

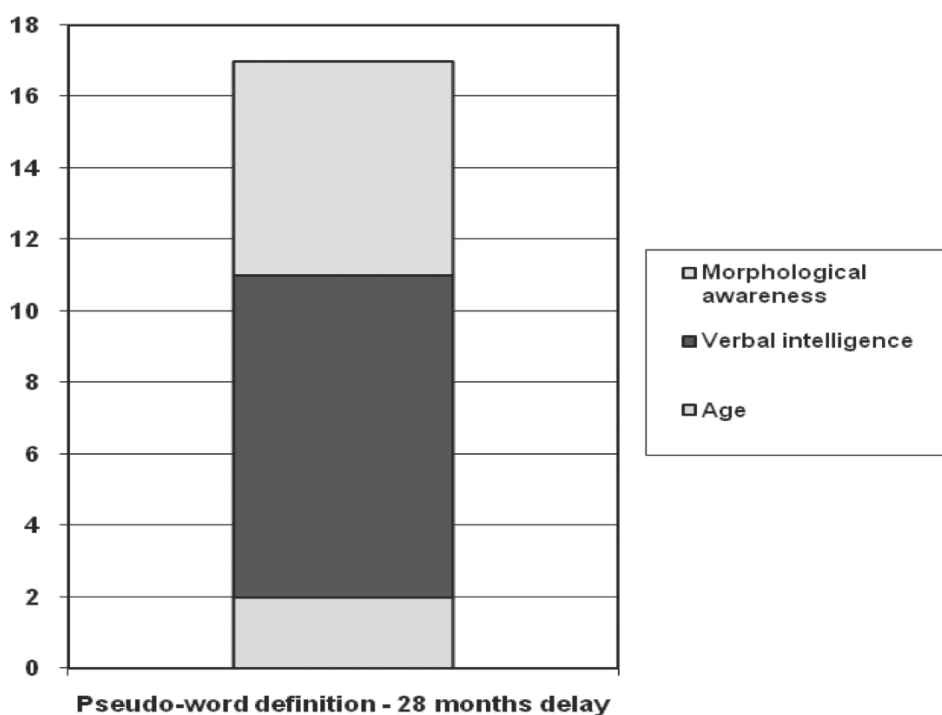
Skipping over the details, which you have in the slides, I will go straight to the results. The children were in fact able to repeat more of our non-words than non-words from Gathercole’s list, and this was a statistically significant difference. Most important, though, was the pattern of correlations. As we expected, awareness of morphology predicted how well the children could repeat words that had a morphological structure, even after controlling for age



and phonological awareness, but morphological awareness was not a predictor of how the children could remember the non-words that did not have a morphological structure. These results showed that morphological awareness plays a role in learning new words.

These results are summarised in the book *Improving Literacy by Teaching Morphemes* – so I will move straight to the next step, which is giving meaning to new words. We gave children two tests, and I am going to focus on one, which required the children to define pseudo-words. We asked children in first through third year in school to define made up words, like 'shoutist', 'chickener', and 'uncomb'. We told them these are not real words, but if they were real words, what would they mean? Although they are not real words, they are so much like words that one child actually had said to us 'shoutist' is a word, and we said: 'OK, what does it mean?' He said: 'It is that person in the army who gives the orders'.

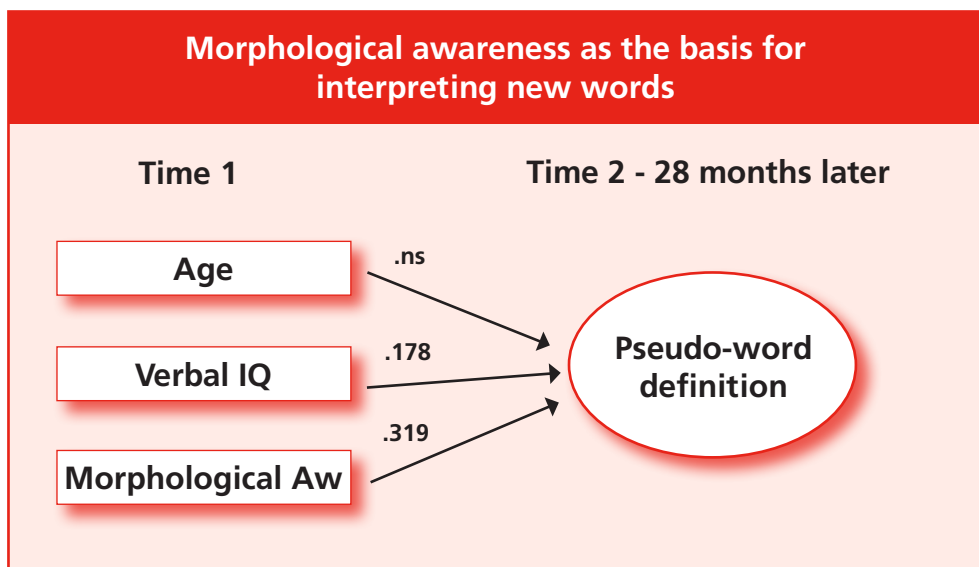
Now remember that we are not interested in pseudo-words because they are made up and because they are funny. We are interested in pseudo-words because children come across words that they have never encountered in print and they have to give meaning to them. Our hypothesis is that the processes they use in giving meaning to pseudo-words are the same they use to interpret words that they encounter for the first time in writing: that is, the processes involved in learning vocabulary from text. In this analysis, we are looking at how well we can predict over two years how the children will be performing in a pseudo-word definition test. We have two analyses here, similar to the prediction of spelling earlier on. The first analysis investigates where morphological awareness explains individual differences in the ability to define pseudo-words after controlling for age and verbal intelligence.



**Percentage of variance explained in the pseudo-word definition task after a 28 months interval**

One can see in the bar chart above that age doesn't have a very large explanatory power, it is only about 2% of variance. Verbal ability explains more, and morphological awareness still explains a substantial amount of variance after controlling for age and verbal ability.

The second analysis considers the relative importance of the three factors, when they are together in a predictive equation. Again, there is a very interesting result. Age is not important – it was not significantly different from zero in the analysis. Verbal intelligence has a significant effect in the prediction, but morphological awareness is more important than verbal IQ. This means that children who are able to figure out the meaning of words they encounter in texts for the first time are not accomplishing this feat because they are cleverer, but because they are more aware of how words are formed.



If you refer back to the discussion of the previous figure, you will see that the Beta values, which are indicated by the arrows, vary between -1 and +1, and that the larger the value is, the more the factor is for the prediction of the ability to define pseudo-words. We can think of the ability to give meaning to pseudo-words as similar to the ability of giving meaning to words encountered in text for the first time. This study suggests that, if teachers promote their students' awareness of morphemes in the classroom, not only they will become better spellers, but they will also become better at interpreting new words they encounter in text: that is, they will be able to increase their vocabulary from reading.

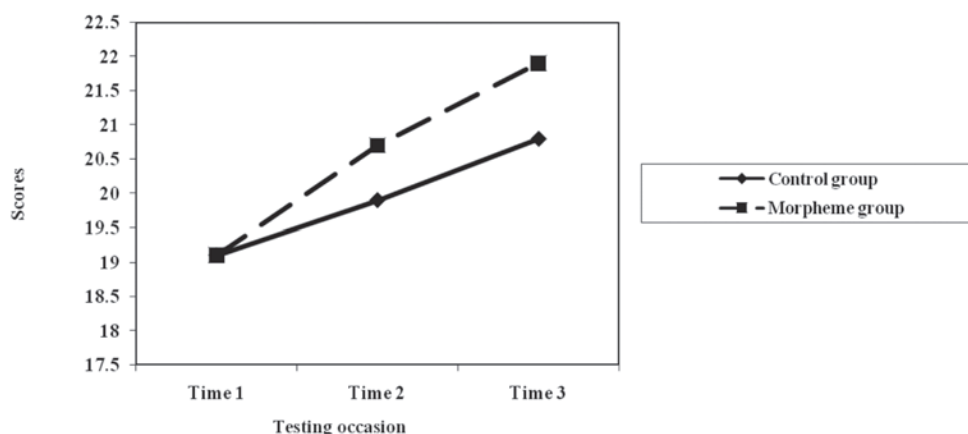
I want to finish by talking about intervention studies and other predictive studies related to reading fluency and reading comprehension. The intervention studies were carried out in this way. We created a package for teachers to use in the classroom to help children become more aware of morphology. We worked with teachers and gave them about one hour of continued professional development. During this hour, we explored the package of materials and discussed with the teachers how to use these activities in the classroom. The details of the intervention study are presented in the book *Improving Literacy by Teaching Morphemes*. The package of materials is on our website, and you can download the whole programme from it. It is called *Discovering the Secrets of Words*. The address is below – you can click on the address and you will find the materials:

<http://www.education.ox.ac.uk/research/child-learning/resources-2/>





So I'll go straight to the results. We assessed the children in a vocabulary test before the teachers had started to use the materials and immediately after the teachers said they had finished the programme, and once again at least two weeks after they had finished the programme. So there is a pre-test, an immediate post-test and a delayed post-test. You can see in the graphs that the intervention group made more progress in the immediate post-test and, more interestingly, when we came back later for the delayed post-test, they had continued to make more progress than the control group.



This was true for children who performed above the median in the pre-test as well as for the children who had performed below the median in the pre-test. The effect size, which measures the amount of gain relative to the control group, was higher for the children who had done less well in the pre-test than for the children who had done better in the pre-test.

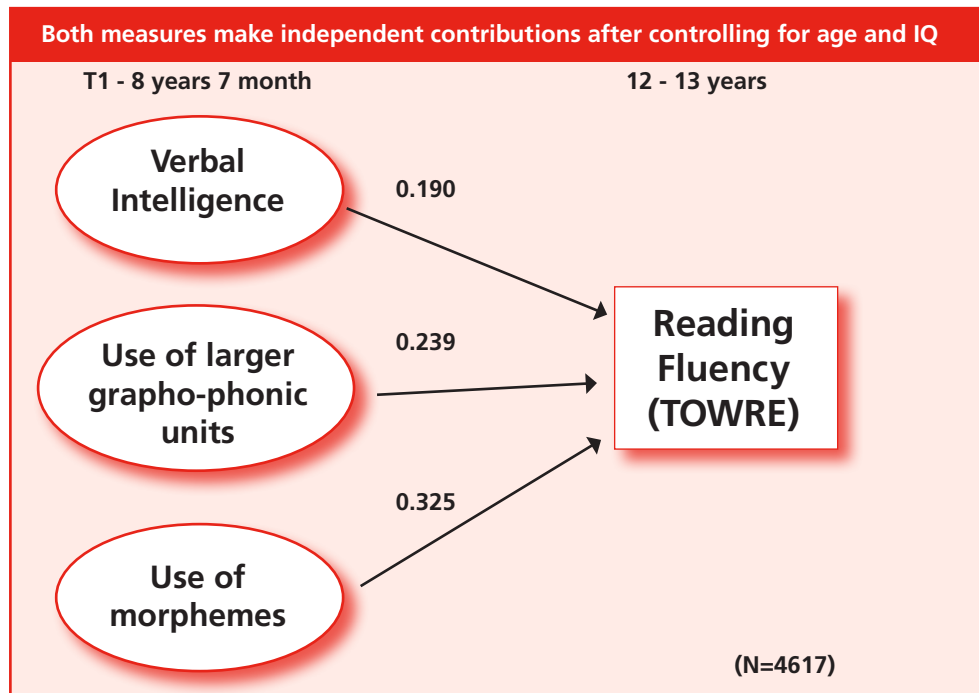
The final research result that I want to mention comes from the longitudinal study of the children in the county of Avon in England, ALSPAC, which I mentioned before. In this study, we had two measures of the children's knowledge of units within words; both types were units larger than grapheme-phoneme correspondences. Some were grapho-phonetic units – that is units that involve a group of graphemes that correspond to a sequence of sounds. In this study, we used the split digraphs as the main grapho-phonetic unit. Words with the split digraph have a vowel, a consonant, and an 'E' at the end, and have to be pronounced differently from similar ones that do not have the 'E' at the end: for example, fat-fate, sit-site, hop-hope and cut-cute. Grapho-phonetic units have no meaning, they just influence the pronunciation of words.

The other type of unit we examined was morphemes, which are units of meaning. Morphemes participate in spelling, as discussed earlier on, but also in reading: for example, the sequence of letters 'SH' is most often in English read as a single grapheme, but if the 'S' is part of one morpheme and the 'H' is at the beginning of another, the morpheme takes precedence, and the 'S' and 'H' are separated in pronunciation: for example, think of the difference between 'dishwasher' and 'dishonest'.

We had two predictions in this study. The first was that each of these units makes a separate contribution to reading fluency and comprehension, because we need to use both in order to read. The second was that the use of morphemes makes a greater contribution both to reading fluency and to comprehension. The greater contribution to reading fluency relates to the fact that many words have fewer morphemes than syllables; so if you use morphemes



rather than syllables in decoding, you need to use fewer units, and that means you can read faster. The greater contribution to reading comprehension relates to the fact that morphemes are units of meaning: that means that if you use morphemes decoding, decoding and comprehension go together, rather than working in sequence.<sup>6</sup>

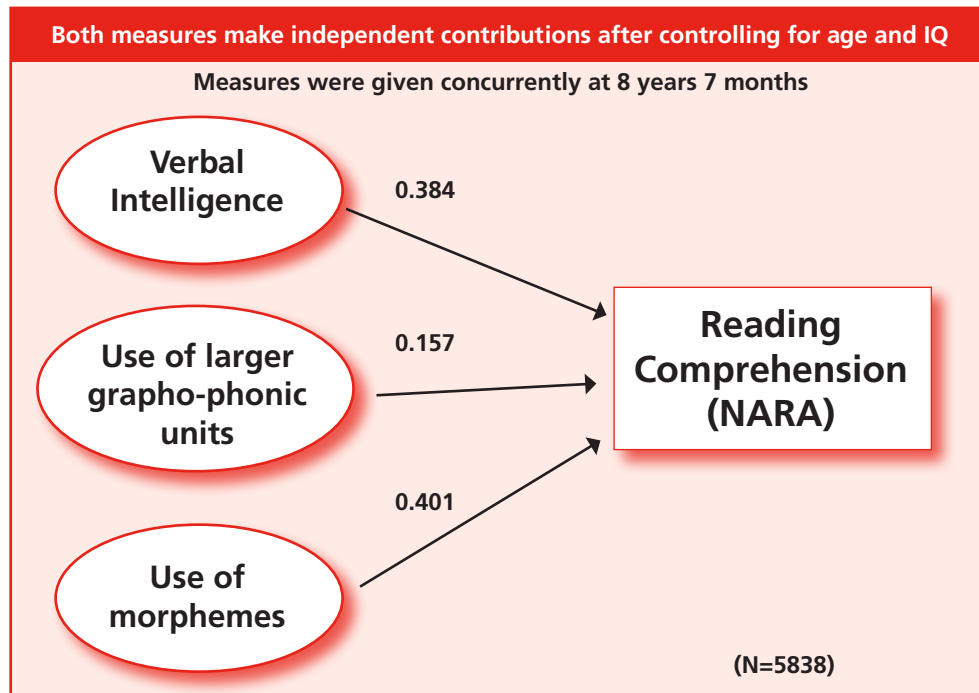


The same measures of the children's use of grapho-phonetic units in reading and spelling were used to predict their performance in a reading comprehension test. Unfortunately this is not a longitudinal prediction, as the children were given the reading comprehension test at the same time as the other two measures. But the result was rather similar as that observed for fluency. The use of the two types of unit made separate contributions to reading comprehension, and the use of morphemes in reading and spelling was the factor that related most strongly to reading comprehension.

In conclusion, what this whole set of studies suggests is that we need to know about more than phonics to teach English literacy, and of course children need to know about more than phonics to learn literacy.

Children need to understand that letters represent sounds: this is the nature of the notation system. There is no doubt that phonological awareness and learning about phonics play a very important role in children's first steps in reading and spelling, as it helps them understand the alphabetic side of English orthography. But they also need to know that there are differences between the way they speak and the way words are written, and to make adjustments to connect the linguistic variation they speak to the written language; in this respect, phonological awareness also helps.

<sup>6</sup> This study was entirely new at the time of this presentation and it is now published in Nunes, T., Bryant, P., Barros, R. (2012). *The development of word recognition and its significance for later reading skills*. *Journal of Educational Psychology*, Online First Publication, March 19, 2012. doi: 10.1037/a0027412.



However today there is also no doubt that going beyond these first steps requires attention to other aspects of the connection between oral and written language through morphemes. English has been described as a morpho-phonetic orthography, to indicate that both phonemes and morphemes are represented in English orthography. Morphemes support children's reading and spelling, help them when they encounter new words encountered in texts, and support their vocabulary learning, reading comprehension and reading fluency. And we also know that children can be taught about morphemes in fun and efficient ways – so in many ways there is no reason why we shouldn't think about making awareness of morphemes an important part of literacy instruction.

## LITERACY AND NUMERACY PROJECTS, NORTH AND SOUTH DEIS PROJECT

**Ms Ciara O'Donnell**

**Professional Development Service for Teachers**

### Introduction

In 2005 the government in the South launched the DEIS action plan for educational inclusion. DEIS (Delivering Equality of opportunity In Schools) was initiated with the purpose of ensuring that the educational needs of children and young people from communities designated as disadvantaged were prioritised and effectively addressed. Its frame of reference was based on the definition of educational disadvantage as it appears in the 1998 Education Act:

*"...the impediments to education arising from social or economic disadvantage which prevent students from deriving appropriate benefit from education in schools."*

The Education Act (32:9)

The rationale for DEIS is rooted in the belief that every child deserves an equal chance to benefit from a quality education and to reach their educational potential, and supports the strategies outlined in the ten year social partnership agreement *Towards 2016* (2006), which seek to ensure that every child

- leaves primary school literate and numerate
- completes a senior cycle or equivalent programme appropriate to their capacity and interests.

This was by no means the first attempt in the South to address educational disadvantage. Since the early 1990s a host of interventions such as *Early Start*, *Breaking the Cycle*, *School Completion Programme* and the *Home School Community Liaison* scheme were put in place to alleviate the problems associated with social and educational disadvantage. DEIS seeks to unify these separate initiatives in a coherent way towards improving the learning outcomes and, as a result, the life chances of children in areas of socio-economic disadvantage. Other drivers of DEIS included the findings of various national reports, notably *Literacy and Numeracy in Disadvantaged Schools* (2005) conducted by the Department of Education and Science (DES), which found that the 43% of children in schools designated disadvantaged yielded results that fell into the bottom 20% nationally, with 64% of the same pupils falling into the bottom 20% for numeracy.

### Targeted schools and supports

Against this backdrop, and as part of the DEIS action plan, a total of 679 primary schools were identified according to the extent to which they fulfilled the following indicators or criteria:

- Number of pupils whose families were in receipt of unemployment benefit
- Number of pupils whose families occupied social housing



- Number of pupils whose families held medical cards
- Numbers of pupils whose mother /father had a history of early school dropout.

Of the 679 schools identified, 345 were awarded urban DEIS status and 334 rural DEIS status. Reduced resources at the time resulted in the prioritisation of the 345 urban schools which were subsequently allocated focussed and targeted support. This support comprised a number of elements including enhanced staffing, financial resources, access to a range of literacy and numeracy interventions and targeted professional development from a team of support service advisors. Each of the 345 urban DEIS schools was allocated a designated advisor whose role was to assist the school in adopting a targeted driven approach to school planning and to provide training and development in a range of recognised literacy and numeracy programmes.

For their part these schools were required to develop three-year action plans which would

- be informed by a process of school self-evaluation and an assessment of the school's current reality in a small number of key areas;
- include a number of locally developed targets arising from the establishment of baseline data, towards measuring progress and outcomes;
- be agreed with all staff members in line with Section 5 of the DEIS action plan which emphasises the importance of planning at whole school level.

The three year DEIS plan identifies five main areas of activity for which schools identify targets:

1. Literacy
2. Numeracy
3. Attendance
4. Parental Involvement
5. Links with local community

DEIS places a particular focus on the realisation of targets associated with literacy and numeracy attainment. To this end, DEIS schools were offered a number of specific intervention programmes to support them in improving literacy and numeracy standards:

*First Steps* is a Western Australian literacy programme which enables teachers to assess the development of students and to link appropriate instruction to phases of development. A comprehensive range of practical teaching and learning experiences is provided at each phase. First Steps has three strand areas; Writing, Reading, and Speaking and Listening. All 345 urban DEIS schools are entitled to nominate staff members to train as tutors in these strands towards the wider dissemination of the programme at school level.

*Reading Recovery* is an early intervention designed to reduce literacy problems. A specially designed series of lessons, individually planned and delivered, provides intensive help for children who fail to make sufficient progress in reading and writing after one year in school.

*Ready Set Go Maths* is an early intervention number programme developed by Eunice Pitt in Northern Ireland and is implemented in the infant classes. The programme includes a

practical handbook that contains detailed guidance on a range of teaching and learning approaches to develop the key concepts and skills of early numbers.

*Maths Recovery* is an evolving research-based programme which offers a uniquely detailed profiles-based assessment of children's early number knowledge, understanding and strategies. Information gleaned from this assessment provides the basis for focussed instruction. Maths Recovery ensures that the lowest attainers are identified at an early age and are taught intensively by Maths Recovery teachers. Individual pupils receive intensive, individualised instruction.

### **The Role of the DEIS advisor**

As mentioned above each of the 345 schools awarded urban DEIS status is supported by a designated advisor from the Professional Development Service for Teachers (PDST). At the time of writing this article the national team of DEIS advisors was led and managed by Ciara O' Donnell, a coordinator in the PDST. The role of the DEIS advisor can be defined as follows: *to provide focussed professional development in the areas of action planning, literacy and numeracy to primary teachers in schools designated as urban disadvantaged.*

The role is multi-faceted and responsive to school needs. It encompasses a range of duties and a catalogue of Continuing Professional Development (CPD) supports including:

- facilitating the development /review of the school's 3 year DEIS action plan at whole staff meetings;
- demonstrating classroom methodologies including those inherent to the four programmes described above;
- initiating clustered support groups with representatives from many schools towards the formation of local learning communities;
- delivering workshops at regional level in action planning, literacy and numeracy;
- providing in-service training in the literacy/numeracy intervention programmes mentioned above.

DEIS advisors adopt a facilitative style of working akin to that of effective coaching. They engage in active listening and seek to ask the right questions aimed at leading schools to arrive at their own solutions. This approach is crucial if schools and teachers are to be enabled to drive their own improvement without relying excessively on external support. To this end the PDST DEIS support team aim to encourage schools to harness internal knowledge and expertise and thus empower schools towards self-sufficiency in the areas of self-evaluation, planning, target setting, implementation of literacy/numeracy programmes and ongoing review of same. The DEIS advisors constantly encourage schools to look within and maximise in-house expertise, and to become authorities in self review and reflection of their practice towards creating a culture of autonomous learning and professional learning communities

### **Reports and evaluations**

Several reports have been released since the inception of DEIS, and their findings serve to guide further attempts to tackle educational disadvantage and to inform future activities in DEIS schools.



- DES Inspectorate (2009): Effective Literacy and Numeracy Practices in DEIS Schools.  
This report conducted by the DES Inspectorate tells the stories of 8 schools where good practice was identified in relation to their use of DEIS supports and highlighted evidence of effective teaching and learning.
- National Economic and Social Forum (NESF) Report (2009) was based on a series of case studies in literacy and found little significant improvement in literacy levels in the schools sampled. It showed that schools welcomed the introduction of the 3 year DEIS plan, increased funding and CPD support, but revealed a need for further supports in the areas of target setting and action planning.
- A DES evaluation of 18 DEIS schools in 2010 focussed solely on standards of planning in the 5 action plan areas of literacy, numeracy, attendance, parental involvement and community links. It showed a general improvement in literacy levels but raised concerns with regard to the setting of quality targets in all 5 areas.
- The Educational Research Centre in Dublin conducted extensive research in 2010 on 229 urban DEIS schools and tracked their progress since 2007 when they began to receive the targeted support. The findings of this report have yet to be published, but early indicators of the research highlight the positive effects of the extra supports, particularly in relation to the targeted CPD. The DEIS planning model emerges as a key driver of cohesive and focussed co-ordination within schools, with concepts of targets and monitoring appearing to be well incorporated into school planning. The research also highlights positive staff participation in the intervention programmes and significant gains for children who were performing least well in literacy and numeracy.

The PDST DEIS advisory team are not involved in the gathering of such formal data, but we do have the privilege of interacting on a daily basis with these schools. Because we have been conducting our work since before DEIS was launched, we have witnessed clear shifts in practice and attitudes since the introduction of the DEIS action plan, some of which includes:

- a genuine belief in the planning process and the value of whole staff input to planning
- increased usage of the language associated with action planning
- teachers assuming informal leadership roles
- openness to peer observation and mentoring of practice
- greater variety of pedagogical approaches and more judicious use of textbooks.

### **The future**

Focussed support for DEIS schools remains a national priority in the South, and The *Literacy and Numeracy for Learning and Life* strategy launched by the Minister of Education in July 2011 is committed to continuing the provision of enhanced literacy and numeracy supports to students living in areas of social, economic and educational deprivation. This ten year plan aims to further drive the focus on school development planning and self-evaluation; ensure that schools are using DEIS resources to best effect, and provide support for school leaders and teachers in understanding the unique needs of students and families from disadvantaged backgrounds.



## References

Department of Education and Science (2005) DEIS (Delivering Equality of Opportunity in Schools), *An Action Plan for Educational Inclusion*. Dublin: Stationary Office.

Department of Education and Science (2005) *Literacy and Numeracy in Disadvantaged Schools: Challenges for Teachers and Learners: An Evaluation by the Inspectorate of the Department of Education and Science*. Dublin: Stationary Office.

Department of Education and Science (2009) *Effective Literacy and Numeracy Practice in DEIS Schools: Inspectorate Good Practice Guides*. Dublin: Stationary Office.

Department of Education and Skills (2011) *Literacy and Numeracy for Learning and for Life: The National Strategy to Improve Literacy and Numeracy among Children and Young People, 2001-2020*. Dublin: Stationary Office.

Department of Education and Science (no date) *An Evaluation of Planning Processes in DEIS Schools*. Not yet published.

Educational Research Centre (no date) *Evaluation of DEIS 2007- 2010*. Not yet published.

Government of Ireland (2006b) *Towards 2016: Ten Year Framework Social Partnership Agreement, 2006-2015*. Dublin: Stationary Office.

Government of Ireland (1998) *Education Act*. Dublin: Stationary Office.

National Economic and Social Forum (2009) *Child Literacy and Social Inclusion: Implementation Issues, NESF Report No. 39*. National Economic and Social Development Office.



## ACHIEVING BELFAST

**Mr Paul Lawther**

**Assistant Senior Education Officer, Belfast Education  
and Library Board**

Achieving Belfast was created as a response to a Northern Ireland Audit Office and Public Accounts Committee report. The aim is to improve literacy and numeracy standards in a number of our schools serving pupils who live in some of the most challenging circumstances. We are now into our fourth year, with the project starting in September 2007 and expected to last 10 years.

### **Context**

Belfast is a city of great contrasts with many affluent parts that are sitting adjacent to areas of great social deprivation. Some of the most deprived areas in Northern Ireland are in Belfast. 21 of the city's 25 most deprived areas lie in the west and north of the city. Many of these areas have suffered from a legacy of 30 years of civil unrest and have as a consequence taken longer than other parts of the city to recover.

Belfast also has a large number of grammar schools that are held in high esteem. In other areas of the city the school performance is very good with high standards across them. However they are not immune from all educational problems. With open enrolment and a declining pupil population, many post primary schools have seen the quality of their intake decline. This has created a problem for both the grammar and secondary sector as both now have a greater concentration of pupils with less ability. It is hoped that Achieving Belfast will act as a catalyst in providing access to the educational skills that are needed to enable the younger population in these areas to eventually participate in the workforce.

The aim of Achieving Belfast is to

1. Eliminate underachievement in pupils in literacy and numeracy;
2. Provide a culture of achievement and aspiration;
3. Increase the engagement in learning of all young people and
4. Raise educational achievement generally.

It is hoped that a concentration on targeting leadership at all levels, the school ethos, teaching and learning and improving the pastoral care system will raise standards within the schools. Achieving Belfast also recognises the importance of engagement with other agencies, the wider community and a greater involvement with parents to address and reduce the barriers to learning and to raise the importance and value of education with such partners as a mechanism to unlock personal and public good.

### **Support Model**

Within the Achieving Belfast programme there are 18 schools: 14 primary and 4 post-primary. Before any support was allocated, a baseline audit of provision was made of the school provision. This would establish the level and type of support needed. To optimise this support the Curriculum Advice and Support Service (CASS) within the Belfast Education and Library Board (BELB) restructured its support teams to provide specialist support in all aspects of school improvement, through their school development plans and associated

action plans, and the use and analysis of data on literacy, numeracy and early years. CASS has also engaged more closely with the board's children and young people's services in the areas of educational welfare, behaviour support, psychology, the youth service and additional parenting support. We recognise that if everyone is pulling in the same direction with an integrated approach then we stand a greater chance of achieving improved outcomes for the schools and pupils. To coordinate this approach each school had a dedicated link officer who has directed the support that is being provided.

The only other support provided was through one additional teacher, termed an Achieving Belfast teacher. They are employed and trained by the Belfast Education and Library Board CASS in literacy and numeracy and allocated to the schools for approximately 2 ½ days per week. Their role is to provide intensive support to identified pupils with their literacy and numeracy work.

Most of the Achieving Belfast teachers are newly qualified and this is their first job. Over the last few years a number of the Achieving Belfast teachers have found full-time posts, and this has resulted in a healthy blend of new and experienced staff. CASS officers meet the Achieving Belfast teachers collectively once a week to monitor progress.

#### **Work to date**

- At key stage 2 results have improved by an average of 25%
- Key stage 3 results in English have improved from 36% to 51% - and Maths from 35% to 40%.
- At key stage 4 GCSE results have improved from 19% to 40%
- The number of pupils leaving schools without any qualifications has fallen from 17.9% to 2.6%.

The project has taken a while to bed in and we are now seeing some good improvements.

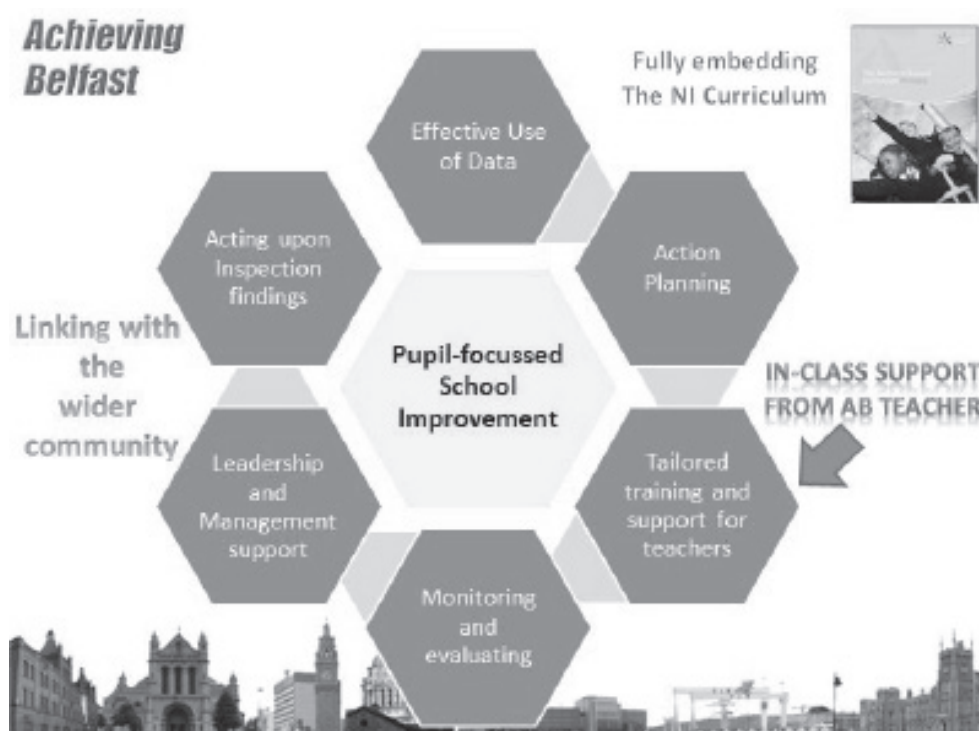
The schools in each area also meet together to monitor progress and some have developed strong links, resulting in shared good practice on staff development days.

#### **An Achieving Belfast case study**

School X has been a part of the Achieving Belfast programme since 2008. It is just one of fourteen possible primary case studies which could have been written; each school has had a unique 'journey' during its time in Achieving Belfast and some still have a little way to travel. School X is typical, in that it received the full range of support the BELB were able to offer and took part in the programme by way of invitation.

School X had around 150 pupils on its rolls in 2008. Approximately 44% of its pupils were eligible for Free School Meals and around 20% were identified by the school as having special or additional educational needs. School X's attendance stood at 92% upon entering the programme. The teaching staff were not used to regular staff meetings which focused upon Teaching and Learning, and structures for a Senior Management Team were not evident.

**Figure 1: Nature of the support for School X through Achieving Belfast**



School X was encouraged to consider Achieving Belfast as supporting a process of pupil-focussed school improvement; the basis of such a process was a clear link between self-evaluation, high expectations and fully embedding the (revised) Northern Ireland Curriculum in all classrooms. The school was encouraged to consider all forms of performance data and their standardized test data was analysed by GL (paid for by BELB) and the interpretation of the data was supported by CASS officers.

This use of data enabled officers to open a dialogue with class teachers, based upon the actual performance of their pupils at the beginning of the school year in September. This quickly led to action planning, including the setting of realistic but challenging targets, and tailored training and support for the teaching staff from the link officer and both literacy and numeracy officers. In-class support was provided for identified target groups through the Achieving Belfast teacher assigned to the school – this was a key element of the AB programme, as it provided a supportive and visible ‘presence’ within each school and was vital in securing the support of all staff.

Monitoring and evaluation procedures were established within school X, including regular pupil progress meetings which enabled three-way discussions between CASS, the school and the Achieving Belfast teacher – focused entirely upon the relative progress of individuals and groups of pupils within the classes. A senior management team was established within the school, regular Teaching and Learning-focused staff meetings took place, and there is now a greater clarity and distribution of management roles.

The ‘unseen’ steps to creating the climate for change within the school included developing trust between the school and officers, developing ownership of the programme by the school, opening channels of professional dialogue, supporting teamwork, and the provision of enthusiastic challenge and clear communication with the school at all levels.

### **Outcomes in case study school**

- During a recent inspection the school was rated as 'good' by the ETI.
- Between 2007 and 2011 Key Stage results have risen by 48% in English and by 50% in Maths; the school is now at the median when compared with other schools in a similar Free Schools Meal band.
- Enrolment has increased by over 40 pupils in the past three years.
- There has been a significant reduction in 'underachievement' (when measured by disparity between Maths/English standardized tests and NRIT assessments).
- There has been a significant increase in capacity building in the school and it is now asking the 'right types of questions' about itself and the pupils it serves – it is well on the way to being a self-evaluating school.

## **ACHIEVING DERRY - BRIGHT FUTURES**

**Mr Sean Barr**

**North West Teachers Centre**

**[www.welb-cass.org](http://www.welb-cass.org)**

The key aim of Achieving Derry - Bright Futures is to develop a coherent, sustainable and long term approach to raising educational outcomes in areas of high social disadvantage in the Derry City Council area.

The key objectives of Achieving Derry - Bright Futures are to:

- Obtain the active involvement of all educational providers, community, voluntary and statutory agencies in the Derry City Council area to improve the life chances and well-being of children and young people and break the link between social deprivation and poor educational outcomes.
- Raise educational outcomes in the Derry City Council area to at least the N Ireland average.
- Encourage greater sharing of expertise and good practice within and across schools and the wider community.

### **From 'Find and Fix' to 'Predict and Prevent'**

To this end Achieving Derry – Bright Futures has adopted a two pronged approach to meeting these objectives. Firstly, all schools have the capacity to improve outcomes for all children, particularly children and young people who live in areas of high social deprivation. Achieving Derry – Bright Futures supports schools in the school improvement process through a range of school-based interventions which are consistent with the Department of Education policy framework *Every School a Good School*.

Secondly, whilst recognizing that schools have an important role in improving life chances for children and young people, there is now a considerable body of evidence which recognises that merely focusing on what happens within schools is, in itself, insufficient to overcome the barriers to learning that many children and young people face. The solutions to overcoming complex and multi-faceted barriers to learning lie not just within schools but



in the families and communities schools serve. Only by working in partnership with other statutory, community and voluntary agencies can these barriers to learning be addressed.

## **Partnership Working**

To date Achieving Derry – Bright Futures has developed partnerships with a wide range of statutory and community organisations in the Derry City Council area to explore ways in which together we can address the underlying causes of educational underachievement rather than only the presenting symptoms. Partnership working has enabled the development of an action plan for 2011-2012.

## **Action Plan**

This year Western Education and Library Board (WELB), in conjunction with a wide range of community and statutory partners, has submitted an action plan comprising of three interlocking themes. These are

- Early Intervention
- School Improvement
- Support for Vulnerable Children and their Families.

Under the Early Intervention theme, WELB, working in partnership with schools and a range of community and statutory agencies, seeks to develop the following:

- Transition from Surestart to nursery schools
- Musical Pathway to Learning
- Library Links
- Speech and Language Provision

Under the School Improvement theme, WELB will work with schools building their capacity to improve the following aspects of their work:

- Target setting
- School specific issues
- Underachievement in Controlled Schools
- Assertive mentoring
- Entitlement Framework
- STEM (Science, Technology, Engineering and Mathematics)
- Youth Service links
- Rights Respecting Schools

Under the theme Support for Vulnerable Children and their Families WELB, in partnership with schools, community, voluntary and statutory agencies, seeks to develop the following programmes;

- FAST (Families and Schools Together)
- Kick Start to Work / School Links (supporting young people for employment)
- CEIAG – Looked After Children (Carers and Looked After Children)
- Anchor (supporting 14 year olds and their families)
- Supporting school-going parents-to-be (family-nurse partnership)
- Family Support Hubs (inter-agency support for families)



### **Progress to date**

Although this is only the third year of Achieving Derry – Bright Futures, we are already seeing significant progress. The Department of Education statistics branch each year give WELB a yearly report on the outcomes achieved by children against a range of indicators e.g. Key Stage results, attendance, suspensions, pupils leaving school with no qualifications etc. In their most recent report Department say: “The statistics tell a positive story for Achieving Derry – Bright Futures schools, with progress shown against the vast majority of key indicators, often at a faster rate than in Northern Ireland as a whole, thereby reducing the gap between the two”.

## **JAPANESE LESSON STUDY**

**Professor John Gardner**

**Queen’s University Belfast/University of Stirling**

**Ms Ita McVeigh**

**St Louise’s Comprehensive College, Belfast**

**Loreto College Cavan and St Louise’s Comprehensive College Belfast**

***A full report of this project is contained in the ‘Three reports for SCoTENS’ publication which will be launched at the October 2012 conference.***

In your programme the focus of this presentation is noted as ‘Research Lesson Study’ and we will get the reason for that in a moment. We have a SCoTENS research project on Japanese research lesson study, and we have in Northern Ireland the 3rd year of a project supported by the General Teaching Council Northern Ireland (GTCNI) and the Regional Training Unit (RTU), which has snowballed over time. For example, in the new academic year we will have 30 schools involved and the initiative is beginning to gather momentum.

The SCoTENS project is a project that is between ourselves at Queen’s and St. Angela’s in Sligo and Mary Magee is here from St. Angela’s. In Belfast we have St. Louise’s College and I have with me Ita McVeigh who is Vice-Principal of St. Louise’s and Caoimhe, Nicole and Meave. Their partner school is Loreto College in Cavan, and we have at the end here Anne McCormack and in the audience we have Julie-Ann and Sharon.

So this project involves myself and Mary and two colleagues who are not here, Kathryn McSweeney from St. Angela’s and Debie Galanouli from Queen’s. And just at the back over there is Gerry Devlin from the General Teaching Council for Northern Ireland. The project is coming rapidly to a conclusion now, and the report will be in next year’s SCoTENS published compilation of research reports.

Why have we been involved in this Research Lesson Study? Many of us have been engaged in professional development over many, many decades and we have learned many lessons many, many times – yet we seem to take nothing from our learning, we seem to just keep on doing it. The typical model that most teachers face for developing their own professional learning is through some kind of external, in service course, or indeed some expert coming into the school to deliver the course. Often there is a requirement for an internal ‘cascade’.



That is, if someone from the school goes out and learns something, there is expectation that they then 'teach' the rest of the teachers. And it is that kind of model, which down over the years has simply not worked.

Part of the reason why this and similar models do not work is that they often propose, not directly but indirectly, solutions and working practices as if they would actually fit everybody's school and everybody's classroom. Being a person who has helped on many of these courses over the years, I know that that is not the intention of the providers. The providers always know that what they are saying isn't going to fit in anywhere in particular, and that whatever it is being dealt with has to be absorbed and adapted within the school. That is where the cascade bit usually does not work for lots of different reasons. But the overall assumption from government very often is: 'If you know what the good practice is, pull the teachers out, tell them what it is they have to do, send them back to their schools to do it and standards will automatically rise'. However, the truth is that much research says this simply doesn't work. So there is little impact, and it is not really sustainable in terms of its effect, though you could say this failed model has been sustained for about 50 years and we will probably see it sustained for another 20. The point now is that schools themselves are beginning to wake up and say "hold on – this is costly - there is far too much cost." There is more pressure on schools to pay for it, there is more pressure on local communities and local education authorities to pay for it - and it is simply not sustainable in the long term.

And when a teacher has to be substituted so they can go on a course, the interruptions have an inevitable impact on the pupils and their education – and this impact is under-researched, perhaps even un-researched. My colleagues here from St Louise's and from Loreto Cavan, seven of them, have all been substituted today, from classes that their pupils will be expecting them to be in. And that is an interruption to the pupils' learning. It is an important thing to do, but perhaps we do too much of it.

So what has been successful? Are things like peer review, team and co-teaching successful - where schools themselves develop attempts internally to deal with challenges that they have? Such challenges might be anything from discipline in the classroom to boys' reading – the perennial problem of encouraging boys to read books. Overall, the research literature suggests that collaborative approaches have seen the most success. And that is what I am going to talk about today: a type of collaborative, professional learning environment which is growing in usage across the UK and Ireland and in the US and which actually started over a hundred years ago in Japan. That is why it is called 'Japanese Lesson Study' or 'Japanese Research Lesson Study'. In Japan it is part of the education culture. It is part of what they do. It is a bit like Reading Recovery in New Zealand. In New Zealand, nobody talks about 'planning to introduce reading recovery to our school this year' – it is part of the culture of New Zealand primary schools. Similarly in Japan, Research Lesson Study is part of the culture of professional learning and part of the culture of schools.

It is so culturally embedded that sometimes it is not just at school level, it is also at the city and national levels, where Lesson Study groups are routinely identifying problems and then schools are working collaboratively to try and deal with them. In fact, in some of the areas of Japan, they have public Research Lesson Study lessons where everyone is invited to view lessons in progress. In a sense it is actually engaging the whole community in looking to see how the classroom challenges are being dealt with. And some schools have actually been

designated 'research schools' to do this almost all the time, in order to help to develop improvement across all classrooms.

So how does it all work in a school? Well the essence of this approach to professional learning is that the school identifies an issue. The two schools that have accompanied me to-day have quite varied approaches to what they are doing. In St Louise's there is a kind of a lateral identification of literacy as a problem across a whole year group and also vertically through subjects or year groups, i.e. horizontal and vertical identification of challenges. Assessment for learning techniques in the classroom are also identified as a focus for the design of Lesson Studies and in this St Louise's group there is a history teacher, a science teacher and so on.

In the Loreto College group, the key focus is on home economics education and a group of colleagues from that school are looking at challenges in the home economics curriculum and how collectively they can deal with them. They are not going outside to learn how to do it; there is nobody coming in to tell them how to do it. They are doing it themselves.

What these colleagues do is that they come together as a group of teachers and say: 'OK, here is a challenge we have, here is a problem we have. Let us design a lesson that might begin to address that problem and we will do it all together'. This is the beginnings of a Lesson Study group coming together – they jointly plan a lesson and, in trying it out, it becomes a research lesson, quite simply because it is the basis of their research into addressing the challenge they collectively have. After it has been planned, one of the group delivers the lesson and the rest observe it being taught. They then jointly analyse how the lesson worked and identify ways to improve it for the next time round, when another member of the group takes her/his turn to teach it.

In many cases the lesson is videotaped to enable the teachers to view it afterwards, but the whole point is that the actual delivery is observed by colleagues on a peer-to-peer basis. Not from any kind of critical/superior/inferior or other non-collegial perspective. For example, in Northern Ireland we have a Performance Review and Staff Development (PRSD) system in which senior teachers are required to observe teachers teaching and to give them feedback. This is a management tool, designed to improve performance and even to inform advancement in salary, and by definition it is clearly not designed to be a collegial or peer to peer approach to professional development. Lesson Study is different and involves colleagues working with each other. They jointly analyse a lesson and design improvements. And as this begins to get some momentum the benefits begin to be disseminated across the school.

Now some of you listening to that will immediately think of all those big theories in education. Well, what have we actually got here – in all but name and jargon? We have got action research. We have got an approach that is: 'try something out to improve it, and try it again'. What else have we? We have *discovery learning*: teachers trying things out and seeing how they work. We have *communities of practice*, groups of people coming together, sharing in their practice and developing their work. We have all of these sorts of theories. We also have *constructivism*, each teacher individually constructing how best to do something. But each group is doing it socially and each group is doing it within the culture of their school, so there is another big theory: *socio cultural constructivism*.



Lesson study is an amalgam of all of these kinds of things and but nobody says the words, nobody uses the jargon – because this is actually peer-to-peer professional work. It is like a case group meeting in a hospital, each with her or his own expertise, trying to deal with a particular patient if you like, and Lesson Study is done on the same expert-to-expert, peer-to-peer basis, with everybody bringing their own expertise. And that is something that is missing in the profession of teaching. Now it is developing, but it is missing a lot, because there is this notion that somehow or other you are supposed to just walk into your classroom, solve all the problems yourself and walk out. And of course, that is not the way to do it.

So the characteristic of a Research Lesson Study is that it is truly 'bottom up'. It is the direct teacher involvement in the design, planning and delivery of the activity. It is a collaborative enquiry, the teachers are learning from one and other. It promotes *reflective practice* – I forgot that one in the earlier list of jargon theories! – another big thing in education. In fact, it does not promote it, arguably it is based on it. It has to be there.

Then the whole point of it is that you don't need 'experts', in inverted commas, from outside – the expertise is in the classroom, it's in the school and it's shared and that is a very powerful dimension of it. All of the teachers own the lesson, not just one of them, and in the schools that we have been working in there have been senior experienced teachers and very new probationary teachers and they are all working peer-to-peer. The one thing that they rule out at the very beginning is 'I am telling you how to do something'. That is gone. There is instead and always: 'I am asking you how to do something, because I want to know'. And that is very often a senior teacher learning from a probationary teacher. This is a flat structure and it works incredibly well.

As I say, all the risks are shared there. They are within the group. If something embarrassing happens, and sometimes it does, and particularly on camera if you are videotaping it, then you know it's between the group and you can always erase it (or tell everybody you are going to erase it and then show it later at the Christmas staff party!), but there is good support in all of this through the professional learning communities within the school. They develop an overall learning community and smaller little communities of practice within it.

So it always has relevance to the classroom base, because it is based on the challenges that the teachers have identified for their own classrooms. It promotes sustainable practice because it is working now for 100 years in Japan. It can develop a cultural entrenchment in the school, it can be part of what we do. If we have an issue in the school, we come together and deal with it, we do not get some smart fellow from somewhere else to tell us how to do it – we actually do it inside the school. And again, in many of the schools, and particularly in St Louise's, and in a moment you might hear from them, it involves pupils. The reason it involves pupils is that the pupils are a part of the lesson. And very often part of that lesson planning the teachers do is that they identify a couple of pupils not just to follow in terms of how they are reacting to the lesson, but also to give feedback on how the lesson went from their perspective. And it is a very, very powerful process.

The implications for such an approach centre on the usual suspect: time. The GTCNI's survey reports on the *Teacher's Voice* (2006 – 2010) cry out from their pages about the lack of time, the compartmentalised and chaotic day of the secondary-level school, and the continuum of never really being out of sight on the pupils in the primary day. The time issue

predominates. For that reason, we have argued from an academic point of view that, for this type of approach to succeed, there needs to be more staff in schools. That is something that is falling a little bit deafly on government ears. But it is something that in a variety of contexts, such as in the medical and the legal professions, the professionals have the time to do their desk work. They build it into what they have to do, and in education we aren't doing that terribly well.

There is a certain amount of resource required, for example, if you are going to videotape things. There is also teacher cover. Teacher cover is a major resource requirement – how otherwise do you get three teachers to go to that Lesson study class for that lesson? It is about time and it is about resources. There isn't too much training in this at all – there is a certain element – but sometimes schools say: can you get us started – can you give us an idea of how to start? And that is what the GTCNI have been doing over this last several years, they have been providing some resources such as training – and that training is generating its own momentum among the teachers themselves who are involved in each of the schools.

So if you want to make it happen in your school, this School-based professional Development document ([http://gtcni.openrepository.com/gtcni/bitstream/2428/96693/1/School\\_Based\\_Report\\_April2010.pdf](http://gtcni.openrepository.com/gtcni/bitstream/2428/96693/1/School_Based_Report_April2010.pdf)) is a very good document. If you take nothing else home, you should really take that one home. It's about school based professional development and in it you will find the full details on Research Lesson Study and other types of professional development in the school - but it's essentially about Research Lesson Study and everything is in there.

At this point you are going to hear from one of the school experts, Ita McVeigh, and then I will wind up.



*Ms Ita McVeigh, St Louise's Comprehensive School, Belfast*





## Ita McVeigh

Well I am not an expert at all, but that is the thing about Research Lesson Studies. You work together in your expertise. But I just want to reflect back to some of the teachers' voices, and how we did it – how we came together at the end of each lesson – three lessons in the group and reflected back our observations to each other, and then evaluated overall. So one particular question that jumps off the page to me is in relation to the teachers' responses to the question as to whether lesson study is an effective model of staff development. Teacher L said:

*I think it would work very effectively as a model of staff development. The study provokes thought and encourages teachers to spend time on the main tasks of planning, preparing, teaching and evaluating. As a result of this project I have gained an invaluable insight into my colleagues' teaching methods and ideas, and I have been able to implement these in my own teaching. I have been inspired by certain strategies that my colleagues employ in their classrooms, so this has allowed me the opportunity to learn from fellow professionals and continue to develop and grow. In addition, and perhaps most importantly, it has highlighted the thoughts and opinions that my pupils have regarding my teaching methods. Through focusing on the pupil voice it has ensured that my evaluation of my teaching is much more worthwhile.*

And so what do our pupils have to say? We involved our pupils in the planning and observation and the feeding back about the lessons, and some of the things they had to say were very generous. And some of the things they had to say made us think a great deal about what we were doing. In terms of enjoyment of the lesson – these are the responses from a group of girls who were involved in peer assessment:

*The fact that everyone got to take part in the marking of each other's essay was brilliant. It was really good because we got to be in the teacher's shoes.  
I really thought the post-it notes were good because you saw all the learning points coming together.  
I enjoyed marking another person's essay and learned how to improve myself.  
I got more out of it.*

In terms of what new learning happened, I learned just how effective this learning strategy can be in helping your understanding in other subjects. I had a better understanding of what helps me learn. I also felt that helping to plan the lesson enabled me to understand it better – I think this crystallizes the whole thoughts of the pupils. I found out that pupils' ideas are important – this was the first time they helped to plan a lesson. I also understood the amount of planning needed to make learning happen.

In terms of reflecting, maybe about improvements – some of the points were also well made. And in terms of the literacy lesson, which looked at writing a letter – I would give the pupils an actual letter to show them how their letters should look when they were finished; I would give more explanation as to how to lay out that letter better; I would draw the whole letter on the board or else take the class to the computer room and let them type their letter; I would go onto a website and find games about writing a letter, and finally, just to show we have not got it all cracked, I think I know a website – Wikipedia – that might help.





# PROMOTING LITERACY & NUMERACY

THROUGH TEACHER EDUCATION

So that is just a little taster of what the pupils and the teachers have to say about Lesson Study research.



## NEW RESOURCES FOR SPECIAL EDUCATIONAL NEEDS ON THE SCoTENS WEBSITE

**Dr Noel Purdy**  
**Stranmillis University College, Belfast**

I have looked after the SEN section of the SCoTENS website for the past couple of years, having answered a call for interested parties a couple of years ago at Malahide. In that I have been building on the excellent work of my predecessor – Dolina Patterson – who had already written a lot of material for the website.

So just to keep you awake as you are heading towards the end of your busy conference, I am going to ask for a show of hands: first of all put your hand up if you have accessed at all the SCoTENS website – very encouraging. Now can I ask you to put up your hand if you have accessed the SEN part of the SCoTENS website – considerably fewer. Now hands up if you have used the SEN website with your student teachers – only 2 or 3.

So you can see that this is a resource that we need to build some momentum out of. The official rationale is that it is a resource for student teachers and for beginning teachers. I would add to that that it is also a very important resource for long serving teachers, and indeed I was chatting to Gerry Devlin from the GTCNI earlier and I know that there is research coming out from GTC in a couple of weeks which is going to reinforce what we all know: namely that teachers who have been in the system for many years often also need lots of capacity building in relation to Special Educational Needs. So the website is not just for student teachers at the beginning of their careers, but also for experienced teachers.

The theme for last year's conference was inclusion and I am not going to go over old ground, but we all know that there are increasing numbers of children with Special Educational Needs in mainstream classes. In Northern Ireland over two thirds of children who have statements are now educated in mainstream schools. When I qualified as a teacher 15 or 16 years ago you could get away in the mainstream without considering yourself a specialist in SEN. Nowadays every teacher, regardless of the school you are in, north or south of the border, is a teacher of children with Special Education Needs. So there is a very strong rationale for the importance of these resources.

So where is the SEN section on the website? When you go into it, there is a series of menus along the top and one of those is entitled Special Educational Needs. If you click on that title there is a drop down menu of lots of different categories. I appreciate very much what John talked about earlier on, about the categorization of children with Special Educational Needs. I am aware of the tension between the ease of use of having categories, and the dangers of using a medical or deficit model of disability. Yet the research that came through from one of the projects that SCoTENS funded recently was that teachers very much wanted guidance specific to particular conditions and disabilities. That is what they are crying out for. So I am aware of the tension in this, and I am aware of the dangers of over categorization of children, and yet we thought this was simply the easiest way of organizing the materials on the website.

We have done it using the categories that are used by the Department of Education in Northern Ireland, so we have the different cognitive and learning difficulties, sensory needs, physical needs and so on. If you select one of these categories such as Social, Emotional and Behavioral difficulties, you then have a number of further options – and then you can go to what you are looking for – in this case an article on ‘Pupils with ADHD’. This is not a highly referenced, research-intensive website. These are practical strategies for teachers. And that is the target market that we are aiming at here. So just be aware that these are practical guidelines, they are based on research, but we are not putting references in here – that is not what we are about – it is guidance for real teachers in real classrooms.

So what is on the site? Well clearly there is information about Special Education Needs and disabilities. There are practical strategies – here are just two or three of the more recent articles that have been added: one on ‘Global Developmental Delay – what is GDD?’ and ‘Makaton – an introduction’. Or MLD – what do we mean by the term Moderate Learning Difficulties? In fact all of the articles give an introduction to these topics. We are not pretending that these are exhaustive guidelines.

We have links to resources, quite a lot of hyperlinks, so even if we are only giving you a snapshot of information, we would often link that to where you can get further information. There are case studies; there is information about legislation; there are details of different roles, like ‘What does a SENCO do?’, and much, much more than that.

We are aware that certainly in the North the Department of Education has just released a resource file and in fact there are more chapters being added to that at the moment. And that is valuable as well – in fact we have publicised it on the website, and we are not in competition with anybody else at all. The DE resource file covers some topics in great detail – this website covers probably a lot more topics but in less detail.

When I took over the site, I was aware that there had been great work done by my predecessor. But I was also keen to evaluate what was already there, to try and make some progress and to be innovative, so I asked some of my students at Stranmillis University College to look at the website and to give me some feedback. And the first finding – and I suspect this is true for a lot of you as well – was that the students did not know it was there, but once they did discover it, they found it really useful. They had not heard about it and part of that was my fault – we had not been publicizing the website and they would not necessarily have found it by themselves, but once they did know it was there, they thought, yes, this is really good and I wish I had known it was there before.

Secondly, students nowadays love interaction, and the thing I should ask is how many of you are in Facebook? Put your hands up if you have facebook accounts – a good number of you. I did the same study in my year 4 class last year in Stranmillis and 89 out of the 90 students put their hands up. And I should say that 89 students turned and stared at the one girl who had not put her hand up, so there was the weight of pressure on that poor girl, and she told me a couple of months later that she had since succumbed to the pressure and has now a Facebook account. So we have this ‘always on’ generation – they love discussion forums, they love to interact with each other and this is what they wanted from the website. They liked the resources ok, but it was too static for them – could we do something more? More of that in just a moment.



And thirdly they found the site quite hard to navigate. In some ways it was the victim of its own success: there were hundreds of resources – hundreds of different little articles, but as they proliferated, it got harder and harder to work your way through them. So what I did, with Joe Shiels of the Centre for Cross Border Studies who is the technical wizard (I am not a technical wizard), was that Joe managed to re-arrange everything after I gave him the new structure for the website. It is now much easier to navigate than it was, and you saw how the drop down menus work. We have a generation of students and young teachers – the Google generation – they want the information immediately, and if they can't find it after two or three clicks at most then forget it, they will go to another site. So the information is now much more accessible than it was in the past.

In terms of discussion forums, last year I did a little pilot study with my own students in a third year module. I put up the case study of a boy with ADHD and, based on the content that I had gone through in the lecture with them, I asked them a couple of questions and invited volunteers to post their comments in response to the questions and also in response to other comments that had been posted, and as you can see there, there were 14 students who did respond. The way it works is that their comments don't go immediately live – there has to be some sort of check by me in this instance. So I am aware that the comments have been made, I can have a look at them before they are posted live, and if I am happy with them, I can press a button and they go up on the system. So there is a slight delay – I think, for very good reasons. So the 14 students who took part in that enjoyed it, and some interesting comments emerged.

So in terms of the prospects for the future, what we need first of all is some more publicity for the website, so please go back and tell your students – and it is great to see some teachers here to-day from schools: this website is for you as well – and please tell your colleagues about it. So more publicity would be really welcome.

Secondly, it is not my website, it is your website, and I would really value contributions. It is a work in progress, and I am sure that some of the articles need updating; some of them are really very brief introductions and I would love to have some more content there, and to be honest I would love to have the time to do it all myself, but if some of you have ideas and time to write a few hundred words, please send it to me, my email address is at the end of this, and I will definitely consider it and acknowledge you as well. I think it would be great for the website as well, particularly if you are from the Republic of Ireland. Obviously I am based in the North and it is hard enough for me to keep up with what is happening in Northern Ireland in terms of SEN and it is particularly difficult for me to keep up to scratch with what is happening in the South – so if you are based south of the border, I would be particularly keen to hear from you and to accept all positive criticism of what is on the site.

And thirdly, and finally, I am hoping to build on the pilot study with the discussion forum, and to have some sort of North-South inter-college discussion forum this term. I have picked these two topics – Down's Syndrome and MLD – and I am hoping to have a discussion forum on each of those in the next couple of months. So if you are interested in having your students participate in this, and it would be truly cross-border, then please send me an email, and I will let you know exactly when it is going to happen. We will make it live for three or four days and will invite comments from all participating colleges and indeed teachers



to contribute. I think it will be a really interesting exercise and very much in the spirit of SCoTENS. So thank you very much, and I look forward to hearing from you in the coming days.

**The website address is <http://scotens.org/>**



## CONFERENCE PROGRAMME

**Thursday 29th September 2011**

**Redwood Suite, Radisson Blu Farnham Estate Hotel, Cavan**

Chair: **Professor Teresa O'Doherty**, Head of Education, Mary Immaculate College, Limerick, (Co-Chair SCoTENS)

10.00 am Registration and refreshment, Redwood Suite Reception Area

10.30 am Official Opening by Irish Minister of State for Training and Skills,  
**Mr Ciaran Cannon TD**, and **Ms La'Verne Montgomery**  
(representing **Mr John O'Dowd MLA**)

11.15 am **Dr Harold Hislop**, Chief Inspector, Department of Education and Skills, Dublin  
**Sir Bob Salisbury**, Chair, Northern Ireland Literacy and Numeracy Task Force

12.15 pm **Professor Jackie Marsh**, Professor of Education, University of Sheffield and  
**Professor John O'Donoghue**, University of Limerick,  
**Literacy and Numeracy – Beyond Definitions?**

1.15 pm **Lunch – Botanica Restaurant**

2.15 pm Parallel workshops – Teacher Educator Perspectives (participants can choose to participate in two of these four workshops)

**Workshop 1. Literacy:** Facilitated by **Dr Eithne Kennedy**, St Patrick's College, Drumcondra and **Ms Deirdre Robson**, St Mary's UC Belfast.

*This workshop will present the Leonardo Effect as an interdisciplinary methodology that facilitates the development of literacy skills among young children through first-hand experiences.*

**Workshop 2. Numeracy:** Facilitated by **Dr Sean Delaney**, Marino Institute of Education, Dublin

*This workshop will draw on teacher education experience and research into teachers' mathematical knowledge to identify challenges in designing the content, pedagogy and assessment of mathematics in pre-service teacher education programmes.*

**Workshop 3. Literacy:** Facilitated by **Ms Michelle Long**, University of Ulster and **Dr Brian Murphy**, University College Cork

*This workshop will use data showing systemic changes in literacy education in schools, as well as research conducted with student teachers, teachers and parents, to look at current classroom literacy practice in rapidly changing contexts in both Irish jurisdictions (and particularly for disadvantaged children).*

**Workshop 4. Numeracy – Facilitated by Dr Aisling Leavy**, Mary Immaculate College Limerick and **Mr Jim Mullan**, Queen's University Belfast

*This workshop will explore North/South perspectives on numeracy issues such as: What*



*is the extent of the numeracy problem? Should teachers of all subjects be responsible for addressing numeracy? How can teacher educators prepare teachers to integrate and promote numeracy?*

- 4.15 pm Refreshment Break
- 4.45 pm Plenary Feedback session from workshops, with questions and discussion
- 5.30 pm SCoTENS Business meeting
- 6.00 pm Close for evening
- 7.30 pm **Launch of Reports in Redwood Suite Reception Area**  
**Teacher Education for Inclusion: SCoTENS 2010 Conference and Annual Reports**, launched by **Ms Anne Barrington** and **Ms Mary Bunting**, Joint Secretaries, North/South Ministerial Council  
**Primary School Teachers' experiences of teaching healthy eating within the Curriculum** launched by **Professor Teresa O'Doherty**  
**Disablist Bullying: An investigation of student teachers' knowledge and confidence**, launched by **Professor Marie Parker Jenkins**
- 8.00pm Dinner in Redwood Suite Reception Area.  
 After Dinner speaker: **Mr Eddie McArdle**, Registrar, General Teaching Council for Northern Ireland

#### **Friday 29th October 2010**

Redwood Suite, Radisson Blu Farnham Estate Hotel, Cavan

- Chair:** **Dr Tom Hesketh**, Director Regional Training Unit (Co-Chair SCoTENS)
- 9.00 am **Professor Terezinha Nunes**, Professor of Educational Studies, University of Oxford. **'Why Teachers must know about more than phonics to teach English literacy'**
- 10.00 am Literacy and Numeracy projects, North and South **DEIS Project**,  
**Ms Ciara O'Donnell**, Professional Development Services for Teachers (PDST) and **Mrs Mary Irving**, St Catherine's Infant School, Cabra, Dublin  
**Achieving Belfast**, **Mr Paul Lawther**, Assistant Senior Education officer, Belfast Education and Library Board and **Bright Futures (Derry)**  
**Mr Paddy Mackey**, Senior Education Officer, Western Education and Library Board
- 11.00 am Refreshments
- 11.30 am Japanese Research Lesson Study - **Loreto Convent Cavan** and **St Louise's Comprehensive, Belfast**. **Professor John Gardner**, Queen's University Belfast and **Dr Mary Magee**, St Angela's College, Sligo



- 12.00 pm New resources for Special Educational Needs on the SCoTENS website:  
**Dr Noel Purdy**, Stranmillis University College, Belfast
- 12.15 pm Closing panel discussion: **Professor Terezinha Nunes**, **Sir Bob Salisbury**,  
and **Professor Jackie Marsh** with contributions from delegates
- 1.15pm Lunch/close



*SCoTENS conference speakers and committee members at the Radisson Blu Farnham Estate Hotel, Cavan in September 2011: From left to right: Professor Terezinha Nunes, Professor Teresa O'Doherty, Professor Jackie Marsh, Dr Geraldine Magennis, Professor Marie Parker-Jenkins and Ms Áine Lawlor.*

## LIST OF CONFERENCE DELEGATES

Mr. John Anderson	Managing Inspector	Department of Education NI
Mr. Ivan Arbuthnot	Chairman	GTCNI
Mr. Barney Ball	Registrar	GTCNI.
Mr. Sean Barr		WELB
Ms. Anne Barrington	Joint Secretary	North South
		Ministerial Council
Ms. Patsey Bodkin	Lecturer in Education	National College of Art and Design
Mr. Tom Boland	Chief Executive	Higher Education Authority
Ms. Amanda Brady	Teacher	Loreto Convent Cavan
Ms. Mary Bunting	Joint Secretary	North South
		Ministerial Council
Dr. Andrew Burke	Senior Lecturer	St Patrick's College, Drumcondra
Mr. Clive Byrne	Director	NAPDP
Mr. Ciaran Cannon TD	Minister of State	Department of Education and Skills
Ms. Paula Carolan	Director	Co Wexford
		Education Centre
Mr. Jim Clarke	Deputy Chief Executive	CCMS
Dr. Marie Clarke	Lecturer & Head of School	University College Dublin
Mr Aidan Clifford	Director	CDU, City of Dublin VEC
Ms. Suzanne Cobbe	Education Executive	CPSMA
Mr. Jonathan Cockcroft	Assist Advisor Prim. Numeracy	Belfast Education and Library Board
Ms. Julie-Anne Conaty	Teacher	Loreto Convent Cavan
Professor John Coolahan	Professor Emeritus	NUI Maynooth
Mr. Peter Creedon	Principal	St Aidan's Primary School
Ms. Yvonne Croskey	Head of FE Policy	DEL
Ms. Ivanna D'Arcy	Study Visits Coordinator	Léargas
Mr. Diarmuid de Paor	Deputy General Secretary	ASTI
Dr. Sean Delaney	Lecturer	Marino Institute of Education
Ms. Karen Devine	Education Committee	INTO
Mr. Gerry Devlin	Senior Education Officer	GTCNI
Ms. Rose Dolan	Lecturer	NUI Maynooth
Mr. John Doyle	Lecturer	Mary Immaculate College
Dr. Patricia Eaton	Lecturer	NUI Galway
Dr. Patricia Eaton	Senior Lecturer	Stranmillis University College
Mr. Jim Enright	Director	Laois Education Centre
Ms. Sharon Farrell	Teacher	Loreto Convent Cavan
Mr. Michael Finneran	Acting Assistant Dean	Mary Immaculate College
Mr. Ciarán Flynn	General Secretary	ACCS
Ms. Niamh Fortune	Lecturer	Froebel College of Education
Ms Deborah Gadd	Senior Programme Officer	British Council
Dr. Mary Gannon	Coordinator	City of Dublin VEC
Prof. John Gardner	Head of School	Queen's University Belfast



Mr. Flan Garvey	Principal	Institute of Technology Tralee
Ms. Lorraine Gillespie	PDST Coordinator	PDST
Ms. Catherine Gilliland	Senior Lecturer	St Mary's University College, Belfast
Prof. Kathy Hall	Head of School	University College Cork
Ms. Dolores Hamill	Director	Kildare Education Centre
Mr. Brendan Harron	Senior Official	INTO
Dr. Tom Hesketh	Director	Regional Training Unit
Ms. Andrea Higgins	Deputy Director Postgrad Dip	NUI Galway
Dr. Harold Hislop	Chief Inspector	Department of Education and Skills
Dr. Padraig Hogan	Senior Lecturer	NUI Maynooth
Ms. Mary Hough	Director	Sligo Education Centre
Ms. Mairéad Hughes	Deputy Director	Centre for Cross Border Studies
Ms. Mary Irving	Principal	St Catherine's Infant School
Ms. Bernie Judge	Ed. and Research Officer	Teachers' Union of Ireland
Ms. Mary Kelly	Lecturer	Hibernia College
Ms. Suzanne Kelly	Lecturer	All Hallows College
Ms. Eileen Kelly-Blakeney	Lecturer	St Angela's College, Sligo
Ms. Eithne Kennedy	Teacher Educator	St Patrick's College, Drumcondra
Mr. Leo Kilroy	Deputy Course Director	Hibernia College
Dr. Treasa Kirk	Divisional/Senior Inspector	Department of Education and Skills
Mr. Paul Lawther	Assistant Senior Ed Officer	Belfast Education and Library Board
Dr. Aisling Leavy		Mary Immaculate College
Ms. Alice Lennon	Curriculum Senior Ed Officer	SELB
Ms. Moira Leydon	Assistant General Secretary	ASTI
Ms. Caoimhe Liddy	Teacher	St Louise's Comprehensive College, Belfast
Ms. Michelle Long	Project Co-ordinator	University of Ulster
Ms. Anne Looney	Chief Executive	NCCA
Ms. Dolores Loughrey	Lecturer	University of Ulster
Dr. Seán Mac Corraidh	Irish-Medium Primary PCGE	St Mary's University College
Dr. Deirdre MacIntyre	Founding Director	ICEP
Mr. Paddy Mackey	Senior Education Officer	WELB
Dr. Mary Magee	Lecturer	St Angela's College, Sligo
Dr. Geraldine Magennis	Senior Lecturer	St Mary's University College
Mr. Anthony Malone	Lecturer	NUI Maynooth
Prof. Jackie Marsh	Professor of Education	University of Sheffield
Ms. Catherine Martin	Director	Carrick on Shannon Ed. Centre
Ms. Patricia McAllister	Events Manager	Centre for Cross Border Studies
Ms. Amanda McCloat	Lecturer	St Angela's College, Sligo
Ms. Ann McCormack	Teacher	Loreto Convent Cavan

Dr. Elaine McDonald	Lecturer in Education	Mater Dei Institute of Education
Mr. Raymond McFeeters	President	NAHT
Mr. Kieran McGeown	Senior Lecturer	St Mary's University College
Mrs. Shauna McGill	Lecturer in Education	University of Ulster
Ms. Marie McLoughlin	President	Froebel College of Education
Mrs. Nicola McMahon	Teacher	St Louise's Comprehensive College
Mrs. Maeve McShane	Teacher	St Louise's Comprehensive College
Mrs. Ita McVeigh	Teacher	St Louise's Comprehensive College
Ms. Pamela Moffett	Adviser of Studies, BEd	Stranmillis University College
Mrs. La'Verne Montgomery	Director Ed. Workforce Dev.	Department of Education NI Directorate
Ms. Elaine Mooney	Lecturer	St. Angela's College, Sligo
Professor Anne Moran	Pro-Vice-Chancellor	University of Ulster
Dr Aidan Mulkeen	Head of Department	NUI Maynooth
Mr. Jim Mullan		Queen's University Belfast
Dr. Isobel Mullaney	Lecturer in Education	National College of Art and Design
Dr. Brian Murphy	Lecturer	University College Cork
Mrs. Muireann Ní Mhóráin	Príomhfheidhmeannach	An Chomharile um Oideachas Gaeltachta & Gaelscolaíochta
Ms. Judith Ní Mhurchú		An Chomharile um Oideachas Gaeltachta & Gaelscolaíochta
Ms. Bláthnaid Ní Shréacháin	Ardfheidhmeannach	Halla Naomh Padraig, Gaelscoileanna Teo
Ms. Máire Nic Niallais		An Chomharile um Oideachas Gaeltachta & Gaelscolaíochta
Ms. Orla Nugent	Senior Lecturer	St. Mary's University College
Prof. Terezinha Nunes	Prof. of Educational Studies	University of Oxford
Mr. Art Ó Súilleabháin	Director	Mayo Education Centre
Dr. Moya O'Brien	Founding Director	ICEP
Ms. Shivaun O'Brien	Education Dev. Officer	Co Louth VEC
Ms. Eileen O'Connor	Director	Drumcondra Education Centre
Ms. Geraldine O'Connor	Lecturer	Church of Ireland Coll. of Ed.
Ms. Brendan O'Dea	Acting Chief Executive	Teaching Council of Ireland
Mr. Paul O'Doherty	DMU Coordinator	CCMS
Ms. Siobhán O'Doherty	Senior Lecturer in Numeracy	St Mary's University College
Prof. Teresa O'Doherty	Head of Education	Mary Immaculate College
Ms. Ciara O'Donnell	Coordinator	PDST
Prof. John O'Donoghue	Associate Professor	University of Limerick
Mr. Peter O'Neill	Deputy Principal	Department of Education



Mr. Paul O'Raw	Researcher in Education	ICEP Europe
Ms. Martha O'Shaughnessy	Primary School Principal	
Ms. Eileen O'Sullivan	Director of Teaching Practice	Mary Immaculate College
Ms. Catriona O'Toole	Lecturer	NUI Maynooth
Prof. Marie Parker-Jenkins	Professor of Education	University of Limerick
Mr. Andy Pollak	Director	Centre for Cross Border Studies
Mr. John Pollock	NI Branch Committee	Association of Teachers & Lecturers
Dr. Noel Purdy	Senior Lecturer	Stranmillis University College
Ms. Maire Quirke	MA Student	National College of Art and Design
Mrs. Deirdre Robson	Head of Art Dept.	St Mary's University College
Sir Bob Salisbury	Chair, N.Ireland Literacy and Numeracy Task Force	
Ms. Audrey Scott	Inspector	Department of Education and Skills
Mr. Seamus Searson	Northern Ireland Organisator	NAS/UWT
Dr. PJ Sexton	Co-ordinator of Masters in Ed.	Mater Dei Institute of Education
Mrs. Maria Spring	Chairperson	Catholic Primary Schools Management Association
Ms. Margaret Stanley	Deputy Joint Secretary	North South Ministerial Council
Mr. Peter Stevenson	Senior Lecturer	St Mary's University College
Mr. Eugene Toolan	Head of Education	St Angela's College, Sligo
Ms. Shelley Tracey	Teaching Fellow	Queen's University Belfast
Dr Pauric Travers	President	St Patrick's College, Drumcondra
Dr. Fionnuala Waldron	Head of Education (History)	St Patrick's College, Drumcondra
Prof. Eugene Wall	Vice President Academic	Mary Immaculate College Affairs
Mr. Eddie Ward	Principal Officer	Department of Education and Skills
Dr. John White	Primary School Inspector	Department of Education and Skills
Dr. Derick Wilson	Reader	University of Ulster



# **Research and Conference Reports**

## **Executive summaries**



**Funded or co-funded by SCoTENS 2009-2011**



## EFFECTIVE MENTORING WITHIN PHYSICAL EDUCATION TEACHER EDUCATION

**Dr Fiona Chambers, University College Cork**  
**Mr Walter Bleakley, University of Ulster, Jordanstown**  
**Professor Kathleen Armour, University of Birmingham**  
**Mr. Frank Herold, University of Birmingham**  
**Dr. Deirdre Brennan, University of Ulster Jordanstown**  
**Ms. Sinead Luttrell, University College Cork**

*A full report of this project is contained in the 'Three reports for SCoTENS' publication which will be launched at the October 2012 conference.*

### **Introduction**

The primary aim of this one-year project is to (a) produce a position statement on effective Physical Education Teacher Education (PETE) mentoring across the island of Ireland; (b) compare current mentoring practice in three PETE programmes: University College Cork, University of Ulster, Jordanstown and University of Birmingham, and (c) consider future directions in PETE mentoring practice.

### **Methods**

Research participants comprised two researchers and ten PE mentor teachers per research site. A range of data collection methods have been used in this project, each of which informed subsequent data collection. The desk study and summary of current evidence on effective mentoring practices to support adults in workplace learning was completed in each jurisdiction in October 2010. This informed the design of the open profile questionnaire which was distributed to all mentors and collected by end of October 2010. An online discussion forum called 'SCoTENS Mentoring in PE', using the Ning website, was launched in November 2010. To initiate discussion, researchers at each university site were allocated a two-week period to (a) provide discussion board questions on mentoring practice informed by the desk study, and (b) monitor and respond to the discussion thread created by mentors. The Ning discussion board closed in February 2011.

A virtual seminar was conducted via conference call on 9th March 2011 linking researchers and mentors at all three research sites. Questions used in the seminar to spark discussion were derived from the Ning discussion board. All data is currently being analysed thematically around the research questions, using grounded theory (Strauss & Corbin, 1998). A draft position statement derived from this process and was issued to all study participants for consideration in April 2011. The research project concluded in June 2011 with production of a final report containing a position statement on 'Effective PETE Mentoring Practice'.

### **Dissemination**

In June 2011, the researchers presented a poster entitled 'The SCoTENS Trilateral Mentoring Project' at the 2011 AIESEP Conference (Association Internationale des Ecoles Supérieures d'Education Physique - International Association for Physical Education in Higher Education) at the University of Limerick.

Future dissemination will include journal articles in *Mentoring and Tutoring* and the *European Physical Education Review*, teacher professional journals in each jurisdiction and conferences, i.e. the PEPAYS conference and the AIESEP 2012 conference.

### Conclusion

Stroot, Kiel, Stedman, Lohr, Faust & Schincariol-Randal (1998) argued that in their research, mentor training led to successful mentors who developed fertile and complex pedagogical content knowledge. The mentors also had strong listening and communication skills with which to motivate and provide emotional support for the mentee. The claim made is that effective mentor training enhances mentor, PETE student and pupil learning in lifelong and life-broad (Larsson, 2009) physical activity. The interim findings of this project would appear to confirm this assertion. The findings also yield rich information on the similarities and differences in mentoring practices across the three institutions that were involved in this project. The dissemination of the project findings should contribute valuable insight into best practices in mentoring PETE students. The recommendations of this research project should therefore be of importance to all teacher educators on the island of Ireland and beyond.



## AN EVALUATION OF THE IMPLEMENTATION OF REALISTIC MATHEMATICS EDUCATION (RME) WITHIN PRIMARY SCHOOLS IN THE NORTH AND SOUTH OF IRELAND

**Dr Pamela Moffett, Stranmillis University College, Belfast**  
**Ms Dolores Corcoran, St. Patrick's College, Drumcondra**

### **Executive summary**

In the context of recent curriculum developments (North and South) advocating a greater use and application of mathematics in a range of contexts, particularly in real-life situations, and emphasising a process-based approach to the teaching of mathematics, a small pilot of RME textbooks in primary schools in both jurisdictions was undertaken. Four primary classes were involved, one Year 7 class (age 10-11) in Northern Ireland and three Fifth classes (age 10-11) in the Republic of Ireland. The study aimed to compare and evaluate the possible impact of implementing RME curriculum materials in primary classrooms in the North and South of Ireland.

Realistic Mathematics Education (RME) and its underlying educational theory is the Dutch answer to the need, felt worldwide, to reform the teaching of mathematics. Mathematics in Context (MiC) is a mathematics curriculum designed according to RME principles for use in American middle schools. A sequence of six lessons from *Some of the Parts* – a transition unit from the MiC series – was chosen as the focus of this study. The six lessons were based on the topic of fractions.

Key research questions were:

1. What is the impact of implementing RME curriculum materials on classroom practices and on children's learning?
2. What are the support needs of teachers implementing the RME curriculum materials?

The research paradigm adopted was design research, with implications for prospective and retrospective analysis. Together, we planned two parallel teaching experiments, one in each educational system. Four teacher participants engaged with trialling an agreed sequence of lessons from an RME textbook in their own classrooms. All four teachers were invited to participate on the grounds of their reputation as 'good' teachers. Four group planning days were interspersed throughout the teaching experiment, held in Stranmillis University College and St Patrick's College Drumcondra alternately. Some of these were audio-recorded and transcribed for later analysis, regarding teachers' ideas about the MiC materials and the teaching experiment. Pupils were also interviewed for their opinions on the MiC materials. Each researcher observed the teaching of lessons in her own school system. Nine of the lessons were video-recorded and short video clips were made of children at work during other lessons. Children's mathematical workings from the lessons were collected and analysed. Similarities and differences in teaching approaches across contexts were examined with a view to identifying some of the supports and constraints experienced by teachers in the implementation of these lessons.

### Findings

Feedback on the MiC materials was largely very positive. Some teachers stated that they had some initial reservations, but these concerns subsided once they had taught the first few lessons. Teachers liked the novel ideas and contexts; they spoke favourably about the illustrations in the pupil textbooks, and they were impressed with the mathematical content. It was felt that the materials also promoted the development of pupils' thinking skills. There was general agreement that the content recommended for each lesson would need to be adapted. In some lessons, teachers felt that there was too much material to work through, while in others there did not seem to be enough. All of the lessons were whole class lessons. While the majority of pupils were able to complete the work, it was felt that the material did not challenge the more able pupils sufficiently. However, teachers did note that some activities were more demanding than others and really did engage the more able pupils.

Overall, feedback was very positive and similar across schools. There was much debate on whether teachers would consider using the MiC materials as an alternative to their existing mathematics textbooks. Pressure to 'prepare children for tests' and 'meet parental expectations' appeared to have a strong influence and teachers were wary of making any significant change to their current practice.

However, aspects of RME appeared to have impacted on classroom practice. The project appeared to have had an impact on teacher confidence. All of the teachers claimed that they now felt more confident in exploring pupils' different strategies. For one of the teachers in particular, participation in the project had promoted reflection on how pupils engage with mathematics. All of the teachers agreed that the project had been a very worthwhile and rewarding experience. Perhaps the most significant benefit had been the opportunity to engage in professional dialogue with others. The North/South element to the investigation had also proved interesting. It had stimulated reflection upon the teachers' own professional practice.

Pupils' views on the MiC textbooks were, in general, very positive. They liked the general layout of the MiC textbooks and found them to be clear and informative. All of the children interviewed spoke positively about their experiences in the mathematics lessons. The social nature of the mathematics lessons was particularly well received, with many pupils commenting that they had enjoyed the opportunity to discuss their work with their peers.

Findings from this research project have been disseminated through presentations at the Fourth Conference on Research in Mathematics Education (MEI4) in Dublin (Moffett, 2011), and at the British Society for Research into Learning Mathematics conference in Oxford in November 2011 (Corcoran and Moffett, 2011). A full report on the project is available at: <http://scotens.org/wp-content/uploads/An-evaluation-of-the-implementation-of-Realistic-Mathematics-Education1.pdf>

### Acknowledgements

The researchers are indebted to the teachers in the four schools for their positive and expert engagement with the project's aims. Thanks are also due to the pupils in all classes for their equally positive engagement and contributions.



## DOCTORAL RESEARCH IN EDUCATION – LINKS, CHALLENGES AND OPPORTUNITIES

**Dr Dympna Devine, University College Dublin**  
**Dr Caitlin Donnelly, Queen's University Belfast**

### **Conference organisation and planning**

A joint committee was established between the Schools of Education in UCD and QUB to plan and prepare for the conference. This consisted of two academic leaders, Dr Dympna Devine (UCD) and Dr Caitlin Donnelly (QUB), along with three doctoral students from each school. Two main meetings were held: in November 2010 in UCD and March 2011 in QUB. The structure of the conference was planned jointly, including allocating responsibilities for roles related to the conference, setting up a web-link, decision on conference theme and securing a keynote speaker (Professor Diane Reay, Cambridge University).

This year a website (<http://allirelanddoctoralconference.wordpress.com/>) was developed by one of the students in UCD. We would like to extend this for coming conferences and make it into an interactive networking channel for doctoral students in education all over Ireland over the coming years.

There was considerable liaison between committee members by email in the final weeks leading up to the conference. A poster to advertise the conference was designed by the students and this was circulated to all higher education institutions North and South through the doctoral programme directors and school managers/administrators in each of the institutions. It was also advertised in the ESAI newsletter and in the *Irish Times*. Participation in the committee was a considerable learning experience for the students – as they sorted and selected abstracts and organized the layout and timing of the conference itself. The joint nature of the co-operation between the lead institutions also helps to consolidate links. In the make-up of the committee, we included one student from UCD and one from QUB who had each been involved in the organization of the conference in the previous year. This ensured transfer of learning and building of capacity across the two schools in hosting and organizing the conference.

### **The conference**

The conference was held in the School of Education, UCD on May 13th and 14th 2011. It consisted of 55 presentations by students (from nine Higher Education institutions on the island of Ireland); 8 parallel roundtable sessions and a key note address by Professor Diane Reay entitled 'Passion politics and pitfalls – the rocky road to research'.

A conference booklet was produced giving full details of programme, abstracts and participant details. The paper sessions were clustered into 3 parallel sessions in each time slot and covered themes broadly related to equality in education; inclusive education; curriculum policy and practice; research design and methods; teacher education and professional cultures; citizenship and culture; higher education; assessment; leadership and music education. A full poster display was also organized throughout the conference.

Roundtables covered topics drawn from students' own suggestions in the lead up to the conference (we set up a contact list through the website) and students were clustered into topics of their choice in advance related to: how to get published; preparing for the viva; challenges in conducting fieldwork; challenges with writing at doctoral level. Attached with



this report is a) the conference brochure with call for papers; b) conference booklet, and c) feedback gained through survey monkey. This latter was very positive and signals also issues for development of the conference in coming years.

### **Finance**

A summary outline of expenses incurred is also attached. The dispersal of bursaries was done centrally through the accounts department in University College Dublin. The total expenditure was €5097, of which €2391 relates to bursary allocations to 16 students (a further 3 bursaries were provided through the ESAI), travel/accommodation for the guest speaker and travel of the core committee to QUB for conference planning. All bursaries were awarded on the basis of submission of receipts for cost of travel and accommodation. The remainder of costs (costed as 'office supplies') relates to catering over the conference's two days (wine reception was funded by the UCD School of Education), printing costs of the programme booklet and associated administration costs.



## IMAGES AND IDENTITY

**Ms Dervil Jordan, National College of Art and Design  
Dr Jackie Lambe, University of Ulster, Coleraine**

***“It’s easy to see which side you are on”***

Perceptions and images of national identity among student art teachers from north and south of Ireland

*The research will examine perceptions of national identity through the attitudes and images of two groups of student art teachers from the North and South of Ireland using the dual lens of Art and Citizenship. The exhibition ‘Passion and Politics’ by Sir John Lavery at the Dublin City (Hugh Lane) Gallery serves as a catalyst to explore views and opinions of the two groups of student art teachers on their responses to the exhibition. Both groups of students visited the exhibition together and were then asked to create an image which represented their national identity. Using qualitative content analysis, the students’ responses to each other’s perceptions of what it means to be Irish/ Northern Irish are analyzed to examine attitudinal and behavioral communications (Berelson, 1952)*

The project was known as ‘Images and Identity:the North/South Exchange’ and aimed to pilot and develop a collaborative art and design education project within initial art teacher education North and South which would support the teaching of Citizenship Education across the whole island.

- To examine how exploring personal, national and international identities through Art and Design can change student teachers and learners’ perceptions of themselves and others.
- To promote cooperation in curriculum development across institutions responsible for Initial Teacher Education in the Visual Arts in Ireland (with a specific North/South dimension).
- Our focus will be on the development, testing and implementation of innovative pedagogical materials in Art and Design, curriculum content and methods relating to the development of Citizenship Education.
- To support the development of innovative ICT based content services, pedagogies and practice for lifelong learning.
- To improve motivation for learning, and teaching and learning, through the development of a range of approaches to teaching the visual arts to support transversal key competencies.

Work to date has been in three phases: preparation, data gathering, and data processing and analysis. The researchers met in Coleraine and Dublin in advance of the project starting.

### **Preparation: Phase 1, July-August 2010**

Three planning and development meetings took place between the PGCE coordinator at the University of Ulster and the Post Graduate Diploma in Art and Design Education (PGDip ADE) coordinator at NCAD.

*7 Sir Edward Carson’s comment on the paintings of Sir John Lavery*

Planning for the joint visit to the exhibition *Passion and Politics, The Salon Revisited* at the Dublin City Gallery, The Hugh Lane, Dublin; planning for the seminar and presentation of student teachers images of National Identity in NCAD; planning the development of the post seminar and post exhibition questionnaire and the Citizenship seminar in Coleraine.

#### **Data gathering: Phase 2, October 2010**

Information was gathered to establish the profile of both student groups (biographical details, degree type, experience, other qualifications etc.)

- Both groups of students visited the exhibition of the works of Sir John Lavery at the Hugh Lane Gallery in Dublin. This was followed up by a questionnaire examining the student teachers' responses to the exhibition and their perceptions about the role of the artist as a visual commentator of his times. The exhibition acted as a springboard for generating ideas and discussion around notions of national identity. Sir John Lavery gifted his sizable collection of works to the two cities of Dublin and Belfast, the Ulster Museum and the Hugh Lane Gallery in the early part of the century.

*The exhibition is a significant and invaluable record of one of the most turbulent periods of Irish history. From the 1916 Rising through to the War of Independence through to the birth of the Irish Free State and the State of Northern Ireland; his portraits and paintings are a non erasable and vivid account of the nascent States.*  
(Dawson, B., 2010)

- Students examined the issues and events which formed the exhibition and looked at the role of the artist as a chronicler of his times through a guided tour and participation in a drama workshop related to 'Passion and Politics' exhibition.

Prior to any engagement with the project both groups of student teachers took part in a baseline study where they created an image which represents their national identity. Each student was asked to:

*Select or make an image you feel represents your national identity.*

*Write a short statement (no more than one page) explaining where the image comes from, why you chose it and why you think it expresses your national identity.*

These images were presented to each other and discussed at the NCAD seminar on day two in October 2010. The citizenship element of the day was led by Mary Gannon of the City of Dublin VEC's Curriculum Development Unit (leader of the North/South Education for Reconciliation project). Students participated in a workshop on methodologies for dealing with controversial issues in the classroom.

#### **Analysis from Phase One: November 2010-March 2011**

Text data drawn from the questionnaire was analysed qualitatively and some initial findings will be presented. The images and texts created by the student art teachers on their perceptions of national identity were also analysed qualitatively and these findings were presented at the 'Re-imagining Initial Teacher Education, Perspective on Transformation' conference in St Patrick College, Drumcondra on 30 June-2 July 2011.



### **Phase Two: January-February 2011**

#### *Citizenship Day in Coleraine*

NCAD student art teachers travelled to the University of Ulster's Coleraine campus for a Citizenship Day where both groups of student art teachers participated in a series of workshops on national identity and citizenship. Each student group made a presentation to the entire PGCE subject group on their responses to the Images and Identity project. The NCAD student art teachers presented a selection of digital video animations, which represented their concepts of national identity. The University of Ulster PGCE student art teachers presented some of the pupil's artwork, which had been carried out in the classroom.

### **Desemination: June-July 2011**

The research findings from the 'Images and Identity: North/South Exchange' project were presented at the conference in St Patricks College in June-July 2011. A paper – 'It's Easy to see which side you are on': perceptions and images of national identity among student art teachers from the North and South of Ireland – was jointly presented by Dervil Jordan and Dr Jackie Lambe. The paper explored the potential for embedding citizenship into and art and design through the findings from the student exchange. It examined perceptions of national identity through the attitudes and images of the two groups of student art teachers. The Lavery exhibition 'Passion and Politics' served as a catalyst to explore the views and opinions of the two groups of art teachers. Having visited the exhibition together, both groups presented their images and reflections to each other in a follow up session in the National College of Art and Design.

Two papers from this project have been submitted for publication in two forthcoming books: *Art Education and Contemporary Culture: Irish Experiences, International Perspectives*, edited by Gary Granville, and *Images and Identity: Exploring Citizenship through Visual Arts* edited by Rachel Mason.

### **Potential for future collaboration**

The student art teachers developed curriculum material based on the Images and Identity project. The intention is that this material will be further developed as curriculum art projects in schools. The digital dimension will be explored through online sharing of project ideas and images through flickr / moodle discussion.

## DIRECTORS OF TEACHING PRACTICE RESEARCH GROUP: CONTINUING PROFESSIONAL DEVELOPMENT FOR TEACHING PRACTICE SUPERVISORS

**Dr Bernadette Ní Aingléis, St Patrick's College**  
**Dr Claire Connolly, St Mary's University College**  
**Ms Gail Eason, Stranmillis University College**  
**Ms Geraldine O'Connor, Church of Ireland College of Education**  
**Mr Neil Ó Conaill, Mary Immaculate College**  
**Dr Margaret Farrar, Church of Ireland College of Education**  
**Ms Patricia Slevin, Marino Institute of Education**  
**Mr Séamie Ó Néill, Froebel College of Education**

This report summarises the results of a cross-border collaborative study which examined Continuing Professional Development (CPD) for supervising tutors of teaching practice (TP). This project, which received funding from SCoTENS in March 2010, explored common issues and concerns in the area of TP. It was undertaken by the Directors of Teaching Practice from seven Higher Education Institutions (HEIs) in the North and South of Ireland, each of which provides initial teacher education (ITE) programmes. The project drew on the expertise and experience within these seven colleges and also examined literature in relation to school placement, evidence about the stages of development of beginning teachers, as well as assessment, supervision and reflective practice as they relate to ITE.

The Directors of Teaching Practice of the participating institutions are all involved in the North-South Student Teacher Exchange, which has been running since 2003 (see *page 124*).

The teaching practicum is a central element in the ITE programmes in colleges in the North and South of Ireland. The role of the supervising tutor in supporting student teachers and managing the elements of assessment and feedback during each practicum are critical components in TP. The experiences which the student teacher has of supervision, feedback and mentoring during school placement can assist or hinder their learning. A concern of those who participated in this project was to ensure that the supervising tutor has a positive impact on the development of the student teacher on school placement. Thus its purpose was to share current practice concerning school placement; identify priority areas of CPD for supervising tutors, and design specific modules to support the role of these tutors during TP. The CPD materials designed as a result of this collaborative endeavour are intended for use in the HEIs in both jurisdictions.

The project involved collecting information from the HEIs to enable a comparison between the main requirements in relation to school placement in each B.Ed. programme. The seven participating colleges shared assessment instruments and details of the supervision procedures used to support and evaluate student teachers before, during and after TP. Much commonality was found across the participating HEIs, and the sharing process led to professional dialogues around issues and concerns which impact on the consistency and quality of supervision. These dialogues, which made up the first part of this project, explored



the complexity of the process of assessment of student teachers on TP and the competing demands and expectations which supervising tutors, student teachers and host schools encounter within this process.

The need for HEIs to provide a variety of approaches to support the supervising tutors who engage with students on school placement was identified; in particular a structured support programme for supervising tutors. The second part of the project centred on the design of a CPD programme specifically aimed at those involved in the supervision of student teachers on school placement. The development of the CPD modules entailed the directors working as a community of professionals sharing good practice and engaging collaboratively in researching relevant literature, and designing, trialling and reviewing a new CPD programme for use with supervising tutors.

Discussions around school placement explored the various stakeholders who participate in it, including the student, the cooperating teacher in the school and the supervising tutor. While the CPD programme addressed the needs of both supervising tutors and student teachers, the key focus was on designing methods for building the capacity of supervising tutors, particularly in relation to reflective practice. The modules were planned around a number of key themes which were felt to be critical for TP supervision. These themes included:

- Key principles of supervision: an exploration of the key elements of the role of the supervising tutor during school placement;
- Post-observation feedback: building effective communication and reflective strategies for working with student teachers during school placement;
- Report writing : exploration of the purpose, process and practice of completing assessment and feedback; and
- Assessment of student teachers on placement: some key principles and best practice for grading and assessment.

The four areas above provided the working titles for the CPD modules which were subsequently designed by the Directors. The process of design was collaborative. Each unit was shared within the wider group as it was being developed, and the format, power point slides and workshop materials were agreed by the DoTPs. Each of the four modules is supported by an article which presents relevant literature on each topic. These articles are designed to act as theoretical frameworks for each module and to be a resource for those facilitating the CPD sessions with supervising tutors. Guidelines were also developed to facilitate advance preparation for each workshop.

The final report is in two sections. Part 1 contains an introduction to the project and information about the context of school placement programmes in teacher education in each jurisdiction. Part 2 contains the four modules, the background information for each and the power point slides for use in the CPD sessions along with suggestions for the organization and facilitation of each workshop.

An important element of this collaborative project was the nature of personal and professional learning experienced by the Directors of Teaching Practice. An evaluation of the project indicated that all Directors found it beneficial to have the opportunity to meet, to engage in peer dialogue and to share professional viewpoints on key areas related to their professional responsibilities. The project also provided the context for the Directors to





develop a reflective stance in relation to their work and to review elements of their current practice.

There was a strong sense that the Directors valued the time and space which this project afforded them to meet beyond their own institution and to work collaboratively. It was found that whilst colleagues North and South share broadly similar roles and responsibilities, implementation of their role is undertaken in different ways. Sharing different ways of thinking and implementing practices was stated to have 'led to fresh thinking on familiar issues and problems'. Dialogue with colleagues also facilitated the documentation and dissemination of best practice in a range of areas particularly in relation to school placement and supervision.

The modules produced have received a high level of engagement by supervising tutors at CPD sessions. All the Directors of Teaching Practice have used modules developed in their preparation programmes for school placement tutors. This project has enabled CPD modules specific to school placement to be developed. It has promoted a discourse among the Directors across the island of Ireland which has prompted a critical analysis of current practices. It has also generated quality collaboration. The overarching benefit has been an enrichment of professional practice through sharing of ideas and professional discourse.



## EXPLORING JAPANESE RESEARCH LESSON STUDY AS A MODEL OF PEER TO PEER PROFESSIONAL LEARNING

**Professor John Gardner, Queen's University Belfast/  
University of Stirling**

**Mr Gerard Devlin, Queen's University Belfast**

**Dr Debie Galanouli, Queen's University Belfast**

**Dr Mary Magee, St. Angela's College, Sligo**

**Ms Kathryn McSweeney, St. Angela's College, Sligo**

*A full report of this project is contained in the 'Three reports for SCoTENS' publication which will be launched at the October 2012 conference.*

### **Background**

In 2009-2010 the General Teaching Council for Northern Ireland (GTCNI), in conjunction with the Regional Training Unit and the School of Education at Queen's University Belfast, launched a pilot project in eight schools in Northern Ireland to trial Japanese Research Lesson Study (RLS) as a model of peer-to-peer professional learning. This project is outlined in the report *School-Based Professional Development* which was commissioned by the GTCNI and is available on the GTCNI ARRTS research repository (Galanouli, 2010). According to this report, RLS "is a relatively new approach to professional learning [in the UK and Ireland] and focuses on collaboration among teachers and the creation of learning communities of practice" (p 18).

Known as *Jugyokenkyu*<sup>8</sup> in Japanese, Research Lesson Study is best considered as a rounded and long-term approach to teachers' professional development rather than simply the study of a lesson or lessons. However, the improvement of classroom pedagogy is a central pursuit. In contrast to mentor-mentee and coaching contexts, the core of the RLS process is its peer-to-peer approach. Its key features are self and collective reflection, experimenting with teaching techniques and sharing experience.

The efficacy of RLS in promoting professional development and professional learning has been claimed by a number of researchers<sup>9</sup>, most notably by Stigler and Hiebert (1999) in the United States who attributed the 1999 TIMSS success in mathematics in Japanese schools to its regular use, over some 100 years, by Japanese teachers. Other researchers such as Fernandez and Yoshida (2004) and Cerbin and Kopp (2006) have extended the research base, primarily in the area of mathematics education, in the United States, with strong endorsements of the potential of RLS to effect improvements in pedagogy and, as a consequence, student learning and outcomes. On foot of such research, Lewis and her colleagues in the USA (2006) described how, within just a few years, more than 330 schools were using RLS across 32 states and it had become the focus of many conferences, reports and articles.

Collaborative approaches to professional development have been used and reviewed in the UK for many years (see for example the systematic reviews on the EPPI-Centre website<sup>10</sup>) and the evidence points to considerable potential for school improvement initiatives. In relation to RLS specifically, several researchers have examined its use in mathematics in schools,

including Burghes and Robinson (2009) and Tall (2008). However, it was arguably the work of Pete Dudley (2005, 2008a,b) that initiated the broadening of the focus across the whole school curriculum and across the primary and secondary school sectors.

It was this much broader base, for example including science, literacy and behaviour, that underpinned the 2009-2010 GTCNI pilot study and the feedback from the eight participating schools was very positive. The GTC and Regional Training Unit subsequently agreed to widen the study base, and in the year 2011-2012 30 schools are taking up the initiative. It was also in the context of this success that it was decided to explore RLS in a cross-border project with two secondary-level schools, one each in Cavan (Republic of Ireland) and Belfast (Northern Ireland). This was a joint project between colleagues in the School of Education at Queen's University Belfast and colleagues in the Department of Home Economics in St Angela's College, Sligo. The project adapted the GTCNI's guidelines and supporting resources (Galanouli 2010, Dudley 2008 a,b) to initiate the developments in each college. The schools and teachers are not named in this report but may be contacted through the researchers.

### **Aim and research questions**

This small-scale study aimed to examine this relatively new approach to professional learning in two second level schools, one in the Republic of Ireland and the other in Northern Ireland. The key research questions were:

- Can RLS offer an effective school-based and peer-to-peer approach to staff development in schools?
- What factors facilitate or hinder the improvement of pedagogy and ultimately learning through RLS?

*8 A useful glossary of RLS-related terms may be found on the US-based Research for Better Schools website: <http://www.rbs.org/Special-Topics/Lesson-Study/Glossary-of-Lesson-Study-Terms/212/>*

*9 See for example the resources on the US Lesson Study Research Group website: [http://www.tc.columbia.edu/lessonstudy/articles\\_papers.html](http://www.tc.columbia.edu/lessonstudy/articles_papers.html)*

*10 EPPI-Centre, Institute of Education, London <http://eppi.ioe.ac.uk/cms/Default.aspx?tabid=274#intro>*



## UNDERSTANDING THE POTENTIAL FOR RESEARCH CAPACITY-BUILDING IN INITIAL TEACHER EDUCATION PROGRAMMES NORTH/SOUTH. A BASELINE COMPARATIVE STUDY: PHASE 1

**Dr Jim Gleeson, University of Limerick**  
**Dr Ruth Leitch, Queen's University Belfast**  
**Dr Ciaran Sugrue University College Dublin**

### **Main Research Question**

What is the extent, perceived relevance and potential of research capacity-building during Initial Teacher Education (ITE) programmes?

### **Progress to date**

The relevant policies of the respective Teaching Councils and Departments of Education, the work of the Northern Ireland Education Research Forum, the Research Excellence Framework (REF) and the current Higher Education Authority (HEA) review of ITE in the RoI provide the broader policy context for the study. The final report will locate the research findings in that context, taking account of relevant international literature.

As indicated in the mid-term report, interviews were conducted with a sample of initial teacher education Course Directors (CDs) (primary and post-primary) in both jurisdictions so as to inform the main research tool, an electronic questionnaire, which was issued to 420 ITE faculty (mostly full-time) in 25 institutions throughout Northern Ireland (NI) and the Republic of Ireland (RoI). As of 20th August 2012, 137 (33%) responses (of whom 2/3 hold doctorates) have been received, although a considerably higher return is anticipated after the summer recess. Some interesting findings include:

- A significant percentage of respondents have no previous experience of teaching in schools.
- Respondents were most likely to have studied mixed methods and action research approaches to research while relatively few had studied quantitative methods.
- One third of RoI respondents rated their research experience as either satisfactory or poor with half of NI respondents saying it was satisfactory.
- One third of all respondents rated their research competence as no more than satisfactory.
- The vast majority of respondents in both jurisdictions would like more time for educational research activity, including collaborative research.
- Half the RoI respondents felt they had 'easy access' to research-related staff development activities as against one quarter in NI.
- RoI respondents have been more successful with individual research funding bids, whereas more NI respondents had been awarded funding for collaborative research.
- Most respondents' publications, particularly in NI, are in refereed journals or in the form of conference papers. Very few had published a single-authored book and most had not published co-authored/edited books either.
- Two-thirds of RoI respondents felt that educational research is 'very valuable' for teachers in schools, as opposed to half of NI respondents.



- Two-thirds of all respondents regard the development of the research capacity (knowledge and skills) of student teachers as very important.
- Almost 90% of respondents regard reflective practice as a key part of the ITE programme and as a form of research.
- All responding CDs in NI and 81% of RoI CDs reported that their student teachers are taught research methods.
- While 29% of RoI respondents felt that a research culture exists 'to a great extent' in their institutions, respondents generally felt that such a culture was present to 'some extent'.

Many of these issues will be explored further during September 2012 in interviews with teacher educators and key policymakers in each jurisdiction.



## CHILDREN EXPOSED TO DOMESTIC ABUSE: HELPING STUDENT TEACHERS UNDERSTAND THEIR ROLE IN A PRIMARY SCHOOL SETTING

**Dr Bronagh McKee, Stranmillis University College, Belfast**  
**Dr Stephanie Holt, Trinity College Dublin**

*A full report of this project is contained in the 'Three reports for SCoTENS' publication which will be launched at the October 2012 conference.*

### **Executive Summary**

It is well known that domestic abuse can impact negatively on children's learning, behaviour and relationships. Schools have access to the child population, placing teachers in an ideal position to recognise when children are exposed to violence and more importantly allowing them to respond and intervene early. Yet domestic abuse education is negligible in many undergraduate programmes and there is limited research available to guide teacher educators in domestic abuse education content. This study is the first comprehensive examination of student primary teachers' preparation in domestic abuse recognition, response and prevention during Initial Teacher Education (ITE) in Ireland. A primary aim of the study was to design and deliver a low-intensity tailored programme to address domestic abuse through arts-based education. Adopting a mixed method approach of Audit, Multiple Choice Questionnaire, Vignette, and Learning and Teaching Evaluations, the report introduces arts-based education as an alternative to traditional learning and teaching in higher education to explore a sensitive yet much needed topic.

The audit was conducted in one of the participating institutions to identify the extent to which the topic of domestic abuse was included in the undergraduate primary teaching curriculum. This informed programme design and the creation of a Community Partnership between a Further and Higher Education Institution Performing Arts Department in Northern Ireland, and two institutions for Initial Teacher Education (ITE), one in Northern Ireland and one in the Republic of Ireland.

Participants in this study were third year students from the Northern partnership institution engaged in a four-year Bachelor of Education degree in Primary Teaching (n=66); final year students from the Southern partner institution engaged in a three-year Bachelor of Education degree (n=85); actors with arts-based education experience from the Community Partnership institution engaged or recently qualified in a two-year National Diploma in Performing Arts (n=5), and a postgraduate social work student (n=1) from the Republic of Ireland acting as understudy. Data were collected relating first to participants' knowledge of four domestic abuse themes: context, risk and impact, response, and prevention before the programme was delivered (pre-test) and after the programme was complete (post-test); and then, in relation to student perspectives on programme content, the use of arts-based education, and self-perceived understanding, knowledge and confidence development.

Findings indicate that student primary teachers' knowledge of key domestic abuse themes increased significantly following participation in this tailored programme, and that arts-based education is seen as a creative yet safe methodology to address sensitive issues such as domestic abuse. Participants unanimously expressed an expectation that ITE should prepare





future teachers for their role in domestic abuse recognition, response and prevention in schools. The data also suggest that simply providing domestic abuse education to student primary teachers does not increase future teachers' confidence to deliver in practice.

Furthermore, a more comprehensive evaluation of current education policy and legal requirements is needed to inform teacher educators of their legal and moral duty to prepare future teachers in this topic. This report concludes with recommendations to address these shortcomings in ITE, including the urgent need to develop programme content and policies to guide teachers and students' decision making in relation to domestic abuse identification, assessment, response and prevention in schools more effectively.

# PROMOTING LITERACY & NUMERACY

THROUGH TEACHER EDUCATION



**Research, Conference and  
Exchange Projects  
Interim Reports**



**Funded or co-funded by SCoTENS 2011-2012**



## 8th North-South Student Teacher Exchange 2011-12

### **Dr Maeve Martin (Evaluator)**

In Spring 2012 12 student teachers from Colleges of Education in Dublin and in Belfast engaged in the eighth year what is now the well established and much-valued North-South Student Teacher Exchange. This brings to 170 the number of student teachers who have taken part in this unprecedented exchange project since it was launched in 2003, initially with EU PEACE funding (making it the longest running of all the North-South exchanges organised by the Centre for Cross Border Studies and SCoTENS).

One of the aspirations of the 1998 Belfast Agreement – whose mention of teacher education as a possible area of North-South cooperation encouraged the Centre to develop this project – was the development of closer collaboration in the field of education between the two jurisdictions on the island of Ireland. The project has proven to be an excellent implementation resource for this aspiration, allowing, as it does, for invaluable and demanding field experiences by the participating students and joint workings between the College of Education communities throughout the island. The N-S Student Teacher Exchange involves a selected number of students who are attending pre-service courses in a B.Ed. (primary) programme carrying out part of their assessed Teaching Practice in a school in the 'other' jurisdiction.



*Directors of Teaching Practice and student teachers at the N-S Student Teacher Exchange Project Orientation Day, January 2012*

A day in April spent debriefing on the 2012 exchange bears testimony to the success of the project, and demonstrates how the exchange has become embedded as an integral component of the professional development programmes in the participating colleges. As the independent evaluator of the project, I observed a marked change of emphasis over the years in how the student teachers engage with the exchange process. In the early days

students were somewhat fretful, and were apt to be preoccupied with infrastructural issues, like transportation and lodgings. Today, the students are more confident, are focussed primarily on educational and cultural issues, and are little bothered by the logistical aspects of the exchange. They are also very insightful and sophisticated in their discussions on the curriculum, on points of similarities and differences in teaching approaches, on the intricacies of building relationships with their pupils and peers, and on how children learn.

St. Mary's University College, Belfast hosted this year's exchange debrief day. It has been the tradition within the exchange to bring together all the exchange personnel to review the most recent exchange, and to speculate on the viability of future exchanges. This day forms the capstone to the planning, preparation, and field placement of the students. It represents an important day for all those who have contributed to the project in its various dimensions—the organisers, the colleges and the student teachers. It opens up the opportunity to share experiences of the exchange, but it also allows for suggestions on how to improve the exchange further. Importantly, it also allows the students to cement their professional links and to develop their evolving friendships.

This year, the debriefing day was organised by the Centre for Cross Border Studies in conjunction with Claire Connolly, Director of Teaching Practice at St. Mary's University College. It provided an excellent opportunity for the beneficiaries of the 2011-2012 exchange to share their collective views on the project in conjunction with their Directors of Teaching Practice. By the time that this debriefing day occurred, the students had the accumulated experience of all phases of the exchange. They had met at a pre-exchange meeting in January, where they had shared expectations and apprehensions as they embarked on a challenging experience in an unfamiliar setting. In hindsight, they acknowledged that their concerns were mostly ill founded, and paid tribute to the support from their host colleges and schools. All of the students spoke of how they had come through the experience enriched both personally and professionally. They cited among their gains: 1) their introduction to the education system at primary level in the host jurisdiction; 2) the valuable opportunity to hone their pedagogical approaches; 3) their access to expert monitoring and advice from their supervisors; 4) their growth in independence and confidence.

Some research data were gathered on the day by this evaluator (and facilitator of the day). A set of questionnaires was distributed to both student teachers and Directors of Teaching Practice. The data from these corroborated the points made in the focus groups and in the plenary discussion. Areas explored invited the respondents to share their views on the comparative merits of the primary school education system, North and South. Other areas included curricular issues, teaching methodologies, school structures, pupil and parental involvement, teaching resources, school ethos and leadership, and the overall organisation of the project.

The students spoke with genuine enthusiasm of the exchange. They wanted the project to continue and made some constructive suggestions on how it could be improved. They commented on how hospitably they had been received in their host schools, and on how helpful everybody had been. The project's atmosphere suggests harmony and mutual cooperation across all its strands and among the stakeholders. There was no dissenting voice.

The Directors of Teaching Practice also spoke very positively about this year's exchange. Their completed questionnaires echoed the views expressed by the students. They too would like



the project to continue even though it makes considerable demands on their busy schedules. The collaborative, partnership nature of the project now seems to have taken hold, and the 2012 exchange seems to have resulted in high levels of satisfaction. The Directors spoke in particular about the debt of gratitude that is owed to the host schools, which work hard to ensure that the students benefit professionally from time with them.

The enjoyment and productivity of the debriefing day did not happen by chance. Appreciation and thanks are due to the efforts of Claire Connolly, Director of Teaching Practice in St. Marys and Eimear Donnelly, the project administrator from the Centre for Cross Border Studies, Armagh who ensured that the day went smoothly and successfully. It is worth noting that a number of planning and debriefing meetings form a significant part of this project. They rotate among the colleges in Belfast and Dublin, and the collaboration they represent is a real strength of the project.



## EXPLORING AND DEVELOPING SPACES AMONG ADULT EDUCATION PRACTITIONERS FOR ONLINE AND ARTS-BASED REFLECTION

**Ms Shelley Tracey, Queen's University Belfast**

**Mr Jim Mullan, Queen's University Belfast**

**Ms Irene Bell, Stranmillis University College, Belfast**

**Ms Geraldine Mernagh, Waterford Institute of Technology**

**Ms Margaret O'Brien, Waterford Institute of Technology**

### **Introduction**

This report presents the outcomes of an exploration of arts-based and online reflection in teacher education. The research was a partnership between the School of Education at Queen's University Belfast (QUB) and the School of Education, Waterford Institute of Technology (WIT).

Relatively little research has been undertaken into the North/ South adult education sector of teacher education or into arts-based and online reflection in teacher education. This project aimed to build on the experiences and expertise of both organisations in terms of these forms of reflection. The project took the form of an action research inquiry into reflective practice in the context of adult education, undertaken from March 2011 to June 2012. The project was located within the practice of the two participating institutions, bringing students involved in professional development programmes for adult educators together.

### **Building on current theories and models of reflective practice**

Traditionally, notions of reflective practice in teacher education programmes conceive of reflection as cognitive skills. The team at Queen's University Belfast extends this conceptualisation to encompass group as well as individual reflection, the use of action methods, and non-verbal as well as verbal methods. The Waterford team bases their conceptualisation of reflection on the notion of alternative ways of knowing (Heron 2008, Belenky 1986) and the belief that this knowledge can best be accessed by incorporating non-language based approaches drawing on metaphor and imagery (Hunt, 2002), and experiential learning (Boud 1985, Mernagh 2009) developed through the use of visual learning journals for teacher participants in the BA and on the Masters in Arts programme.

### **Background**

The research project in Waterford Institute of Technology focused on two modules which were already exploring reflection and creativity. The Language and Power module, which was the primary focus of the project, was part of the Bachelor in Adult Education programme. This programme was developed and co-managed by a partnership between WIT and the National Adult Literacy Agency (NALA) in response to a need identified by adult literacy practitioners for a third level programme to assist in upgrading their skills, and also to gain recognition and accreditation for the knowledge and skills accumulated through their work practice.

Ten participants (1 male and 9 females), all of whom were experienced practitioners working in some aspect of the adult literacy service, agreed to participate in a joint seminar with the QUB practitioners on 21st April 2012 in Dublin. The second module, 'Reflective Practice',



in the Masters in Arts programme, was offered in the WIT School of Education to 14 experienced teachers (2 males and 12 females) working in primary, WIT School of Education, secondary and higher level education. These practitioners were keen to re-energise their perspectives and practice in the classroom or to move to another sector within education.

The Queen's University Belfast participants were students enrolled on the second year of a two-year part-time tutor qualifications programme for adult literacy and numeracy (Essential Skills) practitioners in Northern Ireland. There were 15 participants, 5 male and 10 female, aged between 30 and 50, with between one and three years of experience in the adult literacy sector, and a range of professional experience in business, training, community work, health and social care and public sector organisations. While all 15 were involved in exploring the themes of the project and completing the course assignments designed for the project, nine of these attended the event on 21st April.

Both WIT and QUB students struggled to address the needs of their learners, most of whom lacked confidence due to past negative experiences of learning; this impacted on their willingness to engage in learning and on their self-belief as learners. The collaboration between WIT and QUB in the SCoTENS project was based on a shared belief that arts-based methods have the capacity to enhance inclusion (Miles, 2007). The project drew on the work of Eisner, who conceived of teaching as a form of artistry, and proposed that engaging with the arts illuminates the processes of learning and knowing (Eisner, 2002; Greene, 1995). The partnership was rooted in the deeply embedded understanding that when we are working in education we are above all working in a deeply human activity.

### **Aims and Methodology**

This project aimed to identify current good practice in reflection in the partner institutions, and to offer opportunities for sharing and developing effective examples of arts-based and online reflection. It also intended to explore possibilities for developing peer-led reflective practice networks for adult educators.

The project took the form of an action research inquiry, building on participatory and inclusive models of action research which consult and involve participants in the process rather than acting as objects of the inquiry. It was important to include teachers in the process so that they could develop their confidence in applying the methods which they were experiencing to their practice. Potential ethical issues for the project were identified to do with the unpredictable outcomes of arts-based research and issues concerning online reflection, including access to online work and confidentiality. These issues were be addressed by obtaining full written consent for the use of video and artefacts produced by arts-based work as research data. With regard to online work, the usual professional protocols were respected in all discussion forums.

The main focus of the project was a collaboration between QUB and WIT tutors, Shelley Tracey and Geraldine Mernagh, which investigated the engagement of students on teacher education programmes for adult literacy practitioners in arts-based reflection. This involved planning a combined session and course assignments, which were tailored to the needs of the specific groups. The WIT assignments were 'A Visual Reflective Journal - Extending the limits of Language through Metaphor (Reflective Practice Module)' and a 'Critical Reflection on the creation of a Creative Artefact' in partnership with QUB at the 21st April event (Language and Power block 2).

The QUB Assignment 4, which focused on reflective learning, was adapted for the SCoTENS project and required students to create a film using Windows MovieMaker, to present this work to their peers along with a handout on the theme of their film and to self-assess. Three themes were selected for the project, and the WIT and QUB students allocated evenly to each of these groups so that they could work together on these at a combined event at Marino Institute of Education in April 2012. The themes were:

1. *Using creative methods for learning and teaching literacy*
2. *Using writing to enhance learner voice and learning identities*
3. *Popular culture and representations of literacy (film and TV)*

While the aspect of online reflection was incorporated into the WIT/QUB collaborative event, it was decided to enhance and triangulate this work by exploring the use of technology with the WIT group completing the Reflective Practice module. Unlike the other participants, this group of teachers was not involved in adult education. The responses of these teachers to using Windows MovieMaker had the potential to offer insights into the use of this software, and to help us identify whether some of the ideas which we were implementing with adult educators might be applied to teachers in other sectors.

The online event took place on 14th January 2012, and allowed for the exploration of issues which students might experience with Windows MovieMaker. It also afforded QUB the opportunity to contribute their experience and expertise with technology-based reflection to the WIT team, who welcomed this new initiative. The differences and parallels between adult educators and school teachers were not explored in depth in this project, because they participated in different aspects of the project and because we were interested in the commonalities of the processes rather than distinct differences.

An Essential Skills team member from QUB, Jim Mullan, went to Waterford to explore online reflection tools with students on the Reflective Practice module. Samples of MovieMaker films made by past QUB students were presented and analysed in terms of the techniques used to create them. Students were then supported to make a 4-minute MovieMaker film to express their understanding of reflection. All of the films used combinations of music, text and image effectively, suggesting that MovieMaker is a useful and easily mastered tool for expressing ideas about reflection.

This event enabled the QUB course team to identify key aspects of making MovieMaker films which might be incorporated into teacher education programmes. Participants' responses suggested that it was useful for students to reflect on separately and analyse the use of metaphor, images, text and sound in the film. These ideas provided a framework for the MovieMaker work with the QUB students who were involved in the seminar on 21st April.

### **Seminar on arts based approaches to reflective practice**

This event, which was the culmination of the project, took place at the Marino Institute of Education, Dublin. It brought together 9 participants from the QUB Diploma in the Teaching and Management of Literacy and Essential Skills and 10 from the WIT Language and Power module.

Preparation for the seminar was undertaken separately with both groups of students.

The event was organised as follows:



- Students from both institutions introduced themselves to each other through an ice-breaker activity. They were divided into groups according to the themes on which they had been working and then chose images and quotations from an assortment which represented their ideas about creativity. This is an activity from the first stage of Tracey's model of creative reflection (Tracey, 2007), and offers the opportunity for participants to articulate and share their ideas about creativity. Evaluations of the individual discussions indicate that found the process useful. Reactions included:
- "It was a good way to get to know other people and find out about their practice as well."
- "It showed you how subjective the whole thing is."
- "It was amazing to see how many similar ideas and themes there were."
- The students presented the films or other creative artefacts which they had prepared to each other in their themed groups. The purpose of this activity was for them to share different responses to and experiences of the themes which they had chosen and to build up a common vocabulary.
- In the same groups, students drew their ideas together on the themes and created a joint piece, using arts-based methods of their choice.
- They presented this work to the group, beginning by identifying their success criteria for their work. This built on the principles for assessment for learning which are embedded in the Northern Ireland curriculum (primary and secondary), and which have been incorporated into the QUB courses for adult literacy and numeracy practitioners. These presentations were filmed and the students submitted a group self-assessment of their combined work.

### Summary of Evaluations

33 evaluations were distributed between these two events and 28 of them were filled in and returned. 27 participants stated that they felt the project had succeeded in extending traditional models of reflective practice to include more creative approaches to reflective practice. One person was unsure, because s/he felt that more time was needed to process what s/he had learned.

29 participants also stated that the project had changed their understanding of the concept of reflective practice. Four stated that it had remained the same. This response was to some extent determined by how much prior knowledge participants had about reflective practice. Also, reflection is an implicit rather than explicit component of the Language and Power module.

All 33 participants agreed that the project had enhanced their awareness of the importance of reflective practice. The most striking realisation which was expressed was the identification of reflective practice as a key tool for improving practice. The enthusiasm which was generated for using technology to enhance reflection was expressed by all the participants. Age or gender did not present as a barrier to embracing MovieMaker, digital storytelling, electronic collages, tagxedo or photo story. The intensity of the collaborative event was commented upon by all of the participants: "I learned more than ever before"; "I came away feeling refreshed, energised and equipped with new tools which will enhance my role as tutor and which I am looking forward to passing on to my students." All of the participants expressed their appreciation for the support they received from the course tutors and commented on the importance of the support.

### **Theoretical frameworks and data analysis**

The thorny issue of what constitutes evidence of reflection is well documented in the literature. The project drew on the work of Hatton and Smith (1995), who established an operational framework for different types of reflection described as descriptive reflection, dialogic reflection and critical reflection. In this framework, dialogic reflection has to do with reflection on and with the self, with the aspects of self-awareness which emerge from and build knowledge about practice.

Hubbs and Brand (2005) also created a useful matrix which helps to assess the level of engagement with the subject matter and the level of reflection, from superficial to complex. The WIT/QUB research project built on these models, developing a continuum of reflection from the descriptive to dialogic and critical reflection. The individual assignments completed for the project, especially those for the reflective practice module at WIT, indicated that students had engaged effectively in the reflective opportunities offered by the research project and were demonstrating effectiveness in dialogic and critical reflection.

For the collaborative work which was the focus of the 21st April event, the project partners developed a framework for reflection, 'Creative Process Reflection'. This draws on the element of social reflection in McKenzie's PERHAPS model of (2009) which had been piloted with the participants on the Reflective Practice module in WIT. This recognised the social dimension of reflection for some teachers and extended reflection beyond a personal introspective process. The 'Creative Process Reflection' model begins with engaging students in the personal and introspective aspects of reflection, as in the Hatton and Smith/Hubbs and Brand modules, and extends this to incorporate collaborative or social reflection, reflection on process of using arts-based methods, and reflection on the artefacts created by the use of these methods. This framework was used to analyse the data which emerged from the research process, including recorded interactions between the participants; their presentations of the artefacts which they created together; self-assessments by groups on these artefacts, and reflections on the process in individual assignments for the Language and Power module.

### **Collaborative/ social reflection**

In their collaborative reflections, the students developed their understanding of models of creativity, their roles as adult educators, and of one another's practice. Groups identified commonalities: education policies which did not address fully the needs of learners who needed to be included; education policies which focused on de-contextualised skills at the expense of holistic models of education; the need for teachers working with marginalised groups to share their ideas and practice; how easily they as teachers could be marginalized.

The group also recognised how collaborating in creative activities seemed to create open and respectful relationships which supported dialogue at a very deep level given that they had not known each other: "you could call it speed dating". This helped people to overcome feelings of inadequacy and concentrate on what they had to offer the group discussion: "the most significant part for me was the gelling among our small group. I wasn't expecting it, but it felt great". Given that ongoing professional development is dependent on participating in a community of practice, this outcome is particularly significant.



## Reflection on using arts-based methods

Participants presented their collaborative group project to the group and were struck by the sense of ownership which members of the group felt for the work. Given that there was a very tight time frame within which to complete this project, each of the groups commented on how surprised they were to have arrived at some form of workable common ground. Given that “very strong feelings and differences of opinion” existed between group members, participants commented on how the creative process seemed to be particularly helpful for building respect for difference while moving towards consensus. All but one participant felt that the process had supported inclusivity. Lateral thinking and consciously searching for other perspectives seemed to disrupt the stagnant power struggles that can undermine group work.

## Reflection on creative artefacts

Each of the groups presented a self-assessment of their work, along with a mark for their piece. This was the least successful part of the project in terms of outcomes. However, it provided a very useful source of reflection. The difficulties of asking students to participate in a self-assessment exercise began to emerge. The exercise focuses on the personal development and personal fulfilment aspect of learning or learning for its own sake. However it does not recognise that this self-assessment exercise is taking place within the context of accreditation where students are also motivated to achieve good grades. An initial reflection suggests that there is a dilemma for students being invited to suggest why they should give themselves a low mark.

## Dissemination of findings

As this research project was located within the practice of the two institutions, there was no dissemination event beyond these institutions. However, some of the outcomes have been stored on a website and can be disseminated very easily. Besides the collaborative pieces, a number of artefacts produced by individual students emerged from the project: 10 learning journals, 10 reflections on artefacts with QUB, 3 digital stories, 3 electronic collages, a power point slide show, 2 paper collages, and 15 MovieMaker films and handouts on multimodal learning. It is hoped that a specific dissemination event will be possible at a later stage.

It appears from participants’ responses that they are applying their learning from the project to their practice. 12 of the 14 participants from the Reflective Practice module on the Masters in Arts programme who returned their questionnaire said that they are using their learning about reflective practice in the classroom as a result of the module. As teaching was coming to an end for the participants of the joint seminar, application in the classroom can only be tracked in the coming academic year.

The lead investigators from QUB and WIT are currently writing a paper on the project for a special edition of the Canadian journal, *LEARNING Landscapes*, on creativity in education.

## Benefits of the project

The project offered a number of benefits for teacher education on the island of Ireland:

- It brought together practitioners in the field of adult education to enable them to consolidate what they understood by their community of practice and develop appropriate frameworks to support this practice;
- The development of alternative methods of reflection which practitioners might apply in



- their practice for engaging both traditional and non-traditional learners;
- Opportunities for practitioners and teacher educators to develop their professional identities as reflective practitioners and challenge the idea of teachers as mere technicians in the classroom;
- The development of online reflection tools which supports blended and distance learning opportunities;
- Re-examination of what is meant by creativity and what it contributes to the national and international discussions which are taking place about literacy and how it is measured and valued;
- Important links between theories of creativity and how these can be put into practice
- It reaffirmed the importance of learning which acknowledges the affective as well as the cognitive dimension.

The project had a practical impact, in that the participants decided to create a Facebook group so that they could keep in touch with each other and share good practice in literacy teaching, as well as their interest in arts-based methods for teaching and learning.

### **Conclusions**

This research project explored arts-based reflection in the context of teacher education for adult education practitioners; however, these outcomes have potential for teacher education in all sectors.

This project was a positive learning experience for the QUB and WIT teams and for their respective students, who learned from each other about pedagogy, using arts-based methods for reflection, and the different contexts for teaching and learning in the North and South of Ireland. The student learners are also potential beneficiaries of this project: the impact of participating in the project on their tutors means that they would be more aware of the possibilities of creative approaches for including learners who might not respond to traditional methods, following previous negative experiences of education.

Using arts-based methods requires an environment in which participants feel comfortable about engaging in the unpredictable processes of creativity. They also need opportunities to play with ideas and different forms of expression. The project gave participants opportunities to explore and develop the creative use of use of technologies. Windows MovieMaker is an accessible and effective medium for expressing ideas.

The collaboration between the project partners, Shelley Tracey and Geraldine Mernagh, allowed us to share practice and understanding of reflection and creativity through offering a space for us to articulate and debate our ideas and create collaborative frameworks, such as the Creative Process Reflection model. This model was one of the key outcomes of the project – it accounted for collaborative as well as individual reflection, and for engagement with the processes of creativity in developing arts- and technology-based artefacts of reflection.



## ASSESSMENT IN TEACHER EDUCATION NORTH AND SOUTH (ATENS)

**Dr Tracey Connolly, University College Cork**  
**Dr Geraldine Magennis, St. Mary's University College, Belfast**

The concept of assessment has received much attention in educational literature (e.g. Black & Wiliam, 1998) because it is now seen as an equally important element in the teaching and learning cycle. Its importance is verified by Huba and Freed's (2000) definition as the process of gathering and discussing information from multiple and diverse sources in order to develop a deep understanding of what students know, understand and can do with their knowledge. It is also a process of providing feedback to learners so they know how to progress their own learning. Thus, both Assessment of Learning and Assessment for Learning, summative and formative, have been explored and critiqued (e.g., Assessment Reform Group, 2002; Gardner, 2006) for use in classrooms across all age ranges. Indeed, the ensuing educational debates and resultant curricular innovations in Northern Ireland and the Republic of Ireland have served to secure the important place and role of assessment in the business of teaching in general.

Therefore, this study is timely since those going out to teach will be expected to assess their pupils with competence and confidence, and it is imperative that they have a deep understanding and experience of having been meaningfully assessed themselves. In that way it is more likely that they will be better equipped to provide the same quality service for others. This premise is supported by the OECD report (2005: 95), *Teachers Matter*, which stresses that:

'Initial teacher education must not only provide sound basic training in subject matter knowledge, pedagogy related to subjects and general pedagogical knowledge, it also needs to develop the skills for reflective practice and research on the job.'

Akin to this is the Teaching Council's Policy on the Continuum of Teacher Education (2010) which queries the limited time and space given over to the meaningful initiation of the development of teachers as reflective, enquiry-orientated, lifelong learners. It emphasises that such development is essential to prepare teachers to continually self-evaluate, collaborate and adapt throughout their careers. Indeed this sentiment underpins the existence of the General Teaching Council of Northern Ireland's (2007) competency-based reflective practitioner model and is also reflected in the current changes being implemented in teacher education courses in the Republic of Ireland.

Arising from advances in our knowledge of how enriched learning takes place and the central role that assessment plays, this collaborative project conducts a systematic investigation of assessment in initial teacher education in Northern Ireland and the Republic of Ireland with a view to informing the enhancement of practice. By way of gaining and maintaining a focus for this work, the assessments explored were in relation to the school-based teaching practice element of a selection of students either following a concurrent or consecutive primary or post-primary teaching qualification pathway.

The project explores the nature and conduct of teaching practice assessments within a sample of 8 Primary and Post-Primary initial teacher education courses, both concurrent (e.g. B.Ed programme) and consecutive (e.g. PGCE, PDE programmes), drawn from Northern Ireland and the Republic of Ireland. It investigates the links between various teaching practice assessment techniques and subsequent planning, teaching and learning, and it examines the extent to which these various methods of assessment are found to be satisfactory in the opinions of a selection of stakeholders and students.

The project situates and critically discusses the findings with reference to current thinking on assessment. As a frame for this research project, Rogoff's (1995) *Observing Sociocultural Activity on Three Planes: Participatory Appropriation, Guided Participation and Apprenticeship* has been chosen. Rogoff's work is particularly relevant to the experience of initial teachers, readdressing the balance between personal, interpersonal and cultural factors in learning and education, while simultaneously moving assessment from a sole responsibility of the educator to the shared responsibility of the educator and learner. Due to the 'lived' nature of this research project, an interpretative approach is taken. Therefore, thematic, descriptive and narrative analysis is employed to interrogate the data.

The findings of the project question the reality of time and space for student teachers to explore their teaching, integrate theory and practice, reflect on practice and have professional conversations, which appear at times to be superseded by what students see as extraneous and repetitive college paperwork. Current assessment methods are seen as subjective, and some students claim that they are not representative of their teaching practice placement in terms of, for example, relationships forged and learning completed. Some student teachers claim they are excluded from the community of practice within their school, while some state that this was simply because they do not have the time to sit and chat with other teachers and other teachers are also aware of this and do not approach them.

The research found that, in the main, student teachers preempt how they are being assessed and work towards what they perceive as their respective tutor's personality. Although assessment for learning is a journey, and students largely endorse this approach, they tend to create a formula in order to gain a high grade – thus assessment is killing the thing it is supposed to be measuring. In the research students discuss a disconnect between the reality of practice and what is being dealt with at college in terms of schools having their own engrained cultures and systems of 'the way things are done around here'. Students sometimes end up conflicted between what is encouraged at college and what they are able to put into practice in the school setting.



## AN EXPLORATION OF MATHEMATICAL IDENTITY USING NARRATIVE AS A TOOL (MINT)

**Dr Maurice O'Reilly, St Patrick's College, Drumcondra**  
**Dr Patricia T Eaton, Stranmillis University College, Belfast**  
**Ms Elizabeth Oldham, Trinity College Dublin**  
**Dr Miriam Liston, University of Limerick**

The project, known by the acronym, MINT, has three aims:

1. To propose an efficient and effective protocol for third level mathematics educators to explore the Mathematical Identities of their students with a view to improving the teaching and learning of mathematics.
2. To collaborate with researchers in institutions, other than St Patrick's College Drumcondra (SPD) and Stranmillis University College (SUC), in exploring students' Mathematical Identity.
3. To extend the work on Mathematical Identity undertaken in MIST (see below), thus giving insight into how the Mathematical Identities of different cohorts of student teachers compare with one another and with those of students in other disciplines.

MINT builds on the successful SCoTENS-funded project, *A Cross-border comparison of Student Teachers' Identities relating to Mathematics (MIST)*, undertaken by Eaton and O'Reilly during the period May 2008 - August 2010. The Mathematical Identity of an individual can be defined as the relationship she/he has with mathematics, including knowledge and experiences, and perceptions of oneself and others.

MINT has been conceived and developed by Dr Maurice O'Reilly (Department of Mathematics, SPD), Dr Patricia Eaton (Department of Mathematics, SUC), Ms Elizabeth Oldham (School of Mathematics, TCD) and Dr Miriam Liston (NCE-MSTL, UL) in collaboration with Dr Christine Horn (School of Creative Technologies, Dun Laoghaire Institute of Art, Design and Technology).

Work on MINT involves three phases: preparation, data gathering, and data processing and analysis. The researchers met in Dublin on 3/08/11, 27-28/06/12, and 7/08/12, and in Belfast on 16-17/05/12, working on phase 1 (preparation).

### **Preparation (August 2011 – September 2012)**

This phase has involved consolidating the research framework for MINT based on the background work on MIST, as well as new developments in the fields of identity and narrative in the past decade. The challenge of forging a reasonable robust framework for qualitative research in an extended range of third level institutions was significant, yet very fruitful. Moreover, it was necessary to put in place logistical support to facilitate efficient communications as envisaged for phases 2 and 3. All of this work has been completed.

The remaining preparatory work will involve finalising and piloting the data collection instrument. Following the piloting phase, appropriate adjustments will be made to the instrument. Necessary ethical clearance will be made in advance of piloting.



**Data gathering** (October 2012 – April 2013) and

**Data processing and analysis** (November 2012 – June 2013)

Data will be gathered using the instrument prepared for the purpose in all five of the institutions mentioned above. The researchers will collaborate closely in the detail of data collection. The data will be analysed using a modified grounded theory approach, building on the experience of MIST.



## SCIENCE ENHANCEMENT AND LEARNING THROUGH EXCHANGE AND COLLABORATION AMONG TEACHERS (SELECT)

**Dr John McCullagh, Stranmillis University College, Belfast**

**Dr Colette Murphy, Queen's University Belfast**

**Dr Cliona Murphy, St Patrick's College, Drumcondra**

**Mr Greg Smith, St. Patrick's College, Drumcondra**

### Project Aims

This project seeks to explore how teacher exchange and collaboration can enhance and develop science teaching and learning. The project aimed to:

- Facilitate teacher exchange and collaboration with respect to best practice in science teaching and learning.
- Use exchange and collaboration to extend and develop the expertise of two groups of teachers. A group of Dublin-based teachers who, in partnership with science education staff from St Patrick's College Drumcondra, have developed an expertise in classroom practice relating to the 'Nature of Science' (NoS), will disseminate and model their practice to a group of teachers from Belfast. The Belfast-based teachers who, in partnership with Queen's University and Stranmillis University College, have developed an expertise in 'Creative Science Investigations' (CSI), will in a similar way work to develop this practice with their southern partners.

### Project Details

Researchers	Teachers
Dr. Colette Murphy	Mary Jordan
Dr. Cliona Murphy	Anne O'Kane
Dr. John McCullagh	Carol Thompson
Andrea Doherty	Victoria Watson
	Martin Donaghy
	Laura Montgomery
	Yvonne Clarke
	Joanne Beggs



### Project Events and activity

Date	Event	Details
May 2011	Project launch	<ul style="list-style-type: none"> <li>• Introductory seminars outlining project details (one in Belfast, one in Dublin)</li> <li>• Baseline audit of teachers' practice with respect to NoS (Belfast) and CSI (Dublin)</li> </ul>
June- September 2011	Planning for exchange visits	
18th November 2011 1st February 2012	Exchange visit to Dublin	<ul style="list-style-type: none"> <li>• Teachers in each location prepare best practice exemplars</li> <li>• Teachers identify video recordings for future group analysis using DIVER</li> </ul>
February- June 2012	Exchange visit to Belfast	<p>Belfast teachers give seminar on CSI</p> <p>Dublin teachers give seminar on NoS</p>
	Use of DIVER	Teachers use DIVER (Digital Interactive Video Exploration and Reflection) to further develop their practice
June 2012	Teachers develop their practice on NoS (Belfast teachers) and CSI (Dublin teachers)	Teachers incorporate the approaches observed during the exchange visits to their partner schools and during their use of DIVER
August 2012	Project Evaluation	Data is collected using semi-structured interviews, focus-group interviews, field notes, teacher observations, video analysis, analysis of use of DIVER
	Production of Project Report	



## Project Evaluation

To evaluate the project we invited teachers to participate in post-project, semi-structured interviews. These interviews were used to gauge each teacher's experience of the project and their involvement. It was decided that these would be done after the project so as to allow time for reflection, and they were done individually to procure as much information as possible. An interview schedule was drawn up but during each interview additional questions based on teacher responses were included.

## Preliminary Findings

*Question 1: From your experience what were the best and worst aspects of being involved in the Fibonacci project?*

Best Experiences:

- Hans and the workshops with him – very practical, easy to plan, used household items and he had a different and innovative view of science teaching and learning. He thought outside of the box;
- Meeting other teachers and having the opportunity to discuss and share ideas and experiences;
- Actually carrying out the ideas/ activities in the classroom;
- Allowing children to record and report their work in their own way and develop their own interpretations. Giving them the opportunity to lead their learning and consequently allow the teacher to learn from them;
- The change in teaching approach – allowed teachers to re-think their classroom practice.
- New technological experiences of using video;
- Going to Dublin was worthwhile;
- The mixture of secondary and primary teachers was noted as positive as this rarely happens.
- It was new and fresh and brought investigations back into the classroom.

Worst Experiences:

- Presenting in Dublin- skimmed over classroom practice too much;
- Time was tight throughout the year with curricula and syllabuses;
- Trying to edit video clips and make a presentation;
- Hans did the same talk twice – might have been nice to have new ideas;
- Three people identified no worst experience.

*Question 2: Did you find the Fibonacci Project enjoyable? Why?*

All participants said it was enjoyable.

Reasons given included:

- Refreshed and rejuvenated the teacher and helped to regain their enthusiasm for science;
- New ideas; got the resources there and then and refreshed teacher thinking;
- Impacted teaching and how you looked at science positively;
- Loved the camera work;
- Teachers have continued to implement it in school and children use the cameras now;
- No right or wrong answers – every answer was valid.

*Question 3: Did you find the Fibonacci project useful? Why?*

All participants said it was useful.

Reasons:

- Changed teaching approach to science and eventually to various other curricular areas;
- Children more involved and more enthusiastic to contribute;
- Thinking skills improved in children;
- The children have become great scientists;
- Got puppets through the funding – great for the children;
- More solid science- less “airy fairy” with more practical skills;
- Benefitted everyone – teacher, children and other teachers as the approaches were disseminated throughout the school. Increased confidence for the teacher; forced the teachers to re-think their ideas and increased willingness to do practical science. The children were more encouraged to ‘have a go’; there was better understanding through their participation in the process, and all thinking skills were practiced naturally through the process.
- Changed approach to teaching and learning – children had valuable ideas and input and they learned better through increased participation. Children had deeper understandings as they interpreted, recorded and reported their own findings.
- Children found out things for themselves;
- Children were free and easy in their thinking – everyone’s ideas were valid and were tried out; better ideas from students instead of just from the teacher.

*Question 4: How do you feel about the usefulness of video in the classroom?*

All teachers claimed that video was very beneficial.

Reasons:

- Good for teachers to reflect and rethink their practice, e.g. question and evaluate lessons and what children had said;
- Allowed teachers to see how children learn from one another and allowed teachers to learn more about individual children;
- Good for teachers’ technical skills and children’s also as they began to use the cameras;
- Good for children’s learning as refreshers at the end of the year;
- Children enjoyed seeing themselves back;
- Allowed the recording of evidence of classroom practice which could not be put on paper;
- The presence of the video encouraged children to become more focused;
- Allowed for deeper exploration of group dynamics.

*Question 5: What was your experience of the DIVER and Moodle programmes used for sharing videos?*

No teachers described the programmes as viable. The idea behind them was described as great but the practicalities were the opposite.

Reasons:

- Intimidating;
- Time-consuming;
- Couldn’t get head around it – too technical;
- Too much time and energy needed;



- Not useful in the long term – group meetings were better;
- More important to do the actual science rather than discuss it;
- DIVER flawed in that it wasn't on C2K and participants could not upload videos themselves; had to go through research team which meant emailing videos which were usually very large files.
- Participants on the whole claimed that meeting face-to-face was more useful and more beneficial. One teacher also suggested the use of a blog site where teachers could talk online quickly and easily. Another teacher suggested having a 'Resource Amnesty Day' where teachers would come together with resources etc. ready to share with each other. Another suggested short, informal coffee meetings more regularly.

*Question 6: Can you comment on the seminar days in both Dublin and Belfast? How did these compare with your previous experiences of CPD?*

- Dublin was initially worrying (presentation) but in the end it turned out well. The room layout and the fact that the teachers were not very familiar with one another, however, meant it was slightly intimidating.
- Hans was great, providing good practical ideas, which teachers identified as immediately useful in the classroom.
- Very little from secondary for primary teachers (they were disappointed) but having them present was a good idea.
- The smaller group in Belfast was better – Dublin and the bigger group was slightly detached.
- More learned from SELECT seminar days than CPD. SELECT was more hands-on, there were more opportunities for chatting with colleagues and the activities and ideas were actually useful in the classroom.
- Teachers were more engaged in the SELECT days and claimed that more social time was better.
- Teachers described the content of SELECT days as real classroom practice in comparison to CPD course content.
- SELECT was described as more relaxed because teachers were not talked down to, but were co-researchers and were confident in asking anyone a question in the open environment created.
- CPD was described as a waste of time in comparison to the SELECT seminar days.
- The regularity of SELECT was described as good – kept motivation up.

*Question 7: What were your thoughts on the Dublin collaboration?*

- There were mixed reviews on the value of the Dublin collaboration, with most claiming it was fun and interesting, but that the separate curricula and the focus of each separate project were too different.
- Teachers claimed that it was worthwhile but that Dublin teachers appeared more motivated; they seemed to have more scientific backgrounds and were more committed to the project as they were working towards an award at the end of it.
- There were ideas exchanged, but not enough time for these exchanges nor to get to know one another.
- Some described the Dublin group as too big and therefore more difficult to connect with.

- Some described the experience of collaborating with Dublin teachers as refreshing – they liked to see science being taught as a separate subject compared to being taught within the ‘world around us’.

*Question 8: What advice would you give teachers starting this project?*

- Try everything;
- Give everything a go;
- Have an open mind- try not to be too prescriptive and do not be scared of the wrong answer;
- Do not worry if you do not have a science background;
- Take the bull by the horns- if I can do it anybody can!
- Start as soon as possible- strike while the iron is hot!
- Choose 2/3 activities and do them really well rather than skimming over lots of activities.

*Question 9: If you were running the project, what would you keep and what would you change?*

Keep:

- Hans (for the excitement).
- Small group in Belfast
- Videos
- Mixture of primary and secondary
- The research team and their support
- Regular meetings of the Belfast group.

Change:

- Shorter time space between meetings in Belfast or a blog-type means of communicating between meetings;
- Have an informal social space, e.g. coffee shop to share ideas;
- Don't do the Dublin thing – fun but too different and therefore not as useful as the Belfast meet-ups;
- Have more early years teachers;
- Wider network of secondary teachers;
- More time to meet up for planning;
- Resource amnesty day;
- Different speakers at seminar days.

*Question 10: Have you any other comments?*

- Funding was fantastic;
- Great to have time with a partner;
- Dublin was great;
- Presenting work was great;
- Dublin fantastic;
- Support of research team was comforting;
- Great experience;



- Gained confidence from the project and from the research team – it was a great chance and glad to be picked. It was also great to have a partner to bounce ideas off.
- Really useful and glad to be a part of it.

### **Preliminary conclusions**

Both sets of teachers found the project to be very effective in developing their classroom practice. Although the teachers valued the experience of working with new technologies such as DIVER and video-recording in general, the face to face interaction with other teachers was considered to be the most significant aspect of the project.



## A CRITICAL ANALYSIS OF NORTH-SOUTH EDUCATIONAL PARTNERSHIPS IN DEVELOPMENT CONTEXTS - CONFERENCE

**Professor Peadar Cremin, Mary Immaculate College, Limerick**  
**Professor Peter B Finn, St. Mary's University College, Belfast**

The conference entitled 'A Critical Analysis of North-South Educational Partnerships in Development Contexts' took place in Mary Immaculate College (MIC), Limerick on Wednesday November 30th, 2011. MIC, along with St Mary's University College, Belfast, secured funding to hold this conference from SCoTENS. The conference brought together Irish and international experts in the area of educational partnerships for development in a collective effort to assess and evaluate such partnerships and to consider how future planning and policy decisions, both nationally and internationally, might be improved.

The conference also identified and itemised the key issues to be addressed within sustainable, mutually beneficial teacher education partnerships in development contexts, and considered how future planning and policy decisions, nationally and internationally, in the realm of North-South educational partnerships, could be improved. The primary concerns of the conference therefore were to examine issues such as: the principles of partnership (focusing on a critique and evaluation of partnership modalities), partnerships in practice, and policy perspectives on North-South educational partnerships. The audience for the conference comprised of people from academia (particularly those specialised in development education), civil society and non-governmental organisations with a strong commitment to development and development-related areas.

For full conference report go to <http://scotens.org/wp-content/uploads/FINAL-SCOTENS-REPORT2.pdf>



## TEACHERS' VIEWS ON THE FACTORS INFLUENCING THEIR PROFESSIONAL DEVELOPMENT: PERCEPTIONS, EXPERIENCES AND MOTIVATION

**Dr Helen O'Sullivan, Trinity College Dublin**

**Dr Barbara McConnell, Stranmillis University College Belfast**

**Dr Dorothy McMillan, Stranmillis University College Belfast**

### **Executive Summary**

This study aimed to explore the perceptions, experiences and motivational dimensions of continuous professional development (CPD) of teachers from two different jurisdictions: Northern Ireland (NI) and Republic of Ireland (RoI). It addressed the personal, school and system contexts that motivate or inhibit teachers to engage in CPD, whilst looking at the impact of engagement on their practice. A mixed methodological approach incorporating both quantitative and qualitative methods was utilised. Firstly two focus groups (n=9), in association with a review of published literature, were carried out to inform the questionnaire. The quantitative online questionnaire (n=74) was distributed using Survey Monkey.

The findings showed a general level of agreement between teachers in RoI and NI. Teachers in both jurisdictions agreed that their most frequent experience of CPD was an in-service model of mandated CPD. They agreed that the primary purpose of CPD was to upskill themselves and they felt that generally it was their own personal responsibility to engage in CPD. With regard to impact, they felt that gaining accredited, higher level qualifications which were relevant, applicable and provided opportunities for reflection had the most impact on their practice. Findings from this study will support the development of CPD of teachers in both jurisdictions and recommendations will be made to both Teaching Councils as to the way forward with regard to practice and research.

For full report go to <http://scotens.org/wp-content/uploads/Final-Report1.pdf>

## TEACHING CONTROVERSIAL HISTORY: A SYMPOSIUM ON THE TEACHING OF 1916 AND THE BATTLE OF THE SOMME

**Dr Fionnuala Waldron, St. Patrick's College, Drumcondra**  
**Dr Pauric Travers, St. Patrick's College, Drumcondra**  
**Dr Alan McCully, University of Ulster, Coleraine**

### Subject

The 1916 Rebellion and the Battle of the Somme represent significant and iconic events in modern Irish history, the meaning of which can be memorialised, celebrated and contested, depending on the context. The forthcoming centenaries will undoubtedly prompt renewed critical engagement with the events and their legacies. Rusen (2002) has noted the formative and dynamic relationship between identity, historical memory and historical consciousness. The teaching of 1916 and the Somme, and the cultural tools through which public, school and community engagement is mediated (films, textbooks, memorials, murals, television documentaries etc) have the potential to influence children's emerging identities in diverse ways in a North/South context.

This invitational symposium addressed three key questions: What issues are raised by the teaching of the 1916 and the Battle of the Somme in the Republic of Ireland and Northern Ireland? How can we address these issues? What are the implications for teacher education?

### Participants

The participants were historians, history teacher educators, teachers (primary and secondary), curriculum planners, archivists and activists involved in community education. The symposium coincided with the inaugural meeting of the Irish Government's advisory group on the decade of commemorations and the inaugural Carson Lecture in Iveagh House, Dublin, delivered by First Minister Peter Robinson. It was initially envisaged that the number of participants in the invitational symposium would be limited to 25-30. However because of the level of interest generated, this number was extended to 40.

### Programme

Opening the symposium on the afternoon of 29 March, Maurice Manning, Irish Human Rights Commission/Chancellor NUI, spoke of the challenges facing the Irish Government's advisory group on commemorations, of which he is chair, and the role of educators in shaping public attitudes.

This was followed by two keynote addresses: the first, entitled *The Irish Revolution, 1912-22 and the Politics of Memory and Commemoration*, was delivered by Professor Diarmaid Ferriter (UCD) and chaired by Professor James Kelly. The presentation looked at the issues involved in the decade of commemorations from the perspective of the historian, but also the questions it raises for society at large in terms of what is remembered, how it is remembered and communicated. Professor Ferriter examined issues that have arisen in the past in relation to commemorating key events like the First World War, the 1916 Rising, the first Dáil in 1919 and the difficulties and opportunities that have been created for politics,



culture and public commentary. He also identified openings for new research and new perspectives arising from the forthcoming commemorations.

The second keynote was delivered by Professor Keith Barton (Indiana University) on the subject *Remembrance, Identity and Education: How Should Young People Learn about the Past?* Professor Barton suggested that educational institutions expose students to academic, evidence-based study of the past, but they cannot ignore students' historically-grounded social identities. When historical events are emotionally-loaded sites of remembrance, this tension between academic and societal purposes can be difficult to manage. Based on research with students in the United States, Northern Ireland, and New Zealand, he argued that students can better understand history's multiple purposes by studying the nature of historical interpretation itself: students need experience examining how and why historical identities and commemorations are constructed in the present, and how ideas about the past change over time. The session, chaired by Alan McCully, was followed by a reception and symposium supper, hosted by St Patrick's College.

On Friday 30 March, Alan McCully and Fionnuala Waldron presented the preliminary findings of a research project entitled '*Ireland at this time was a troublesome place: student teachers' views on teaching 1916, the Battle of the Somme and the First World War*'. While, in general, student teachers, North and South, demonstrated awareness and openness, the research indicated that levels of historical knowledge varied, with low levels of knowledge evident in relation to key events, particularly among primary student teachers. Most respondents displayed an openness to different perspectives; however there were also instances of prejudice and the assumption of consensus. The implications of this for teacher educators were explored in the subsequent discussion chaired by John Dredge (UCD).

Professor Richard Grayson (Goldsmiths, University of London) delivered the third keynote entitled *Commemorating the Great War: Myth, Memory and 'Military History from the Street'*. Beginning with an assessment of public memory of the First World War in Ireland, Professor Grayson examined how the war's 'myths' have been transformed over the past two decades and how community groups have contributed to new narratives of the war. He focused on the ways in which new sources and methods, used for his book *Belfast Boys*, can be adapted for use in schools, arguing that this 'military history from the street' approach can encourage students to engage with the war in ways which have not previously been possible. The session was chaired Pauric Travers.

This was followed by two short presentations on community initiatives, under the general heading, *Community, Commemoration and Education: a volatile mix?* Sinead Murphy (St Michael's Estate Regeneration Board, Dublin) spoke about a project focused on Richmond Barracks while Sean Pettis (Corrymeela Community) spoke about the Facing Our History project in the North. The presentations and the discussion which ensued highlighted both the vibrancy and power of such community initiatives and the challenges which they pose for formal education.

Over a working lunch, participants were invited to discuss in groups the central concern of the symposium: how should education respond to the issues arising from the forthcoming commemorations. A series of specific questions were posed and considered: Is this an opportunity to have a whole-island approach? Is it appropriate to have a whole-island approach? Where does formal education contribute to the wider picture? Are there

key principles for dealing with the decade of commemorations? How far should this be coordinated across teacher education, schooling, and community education? Do we need a structure/strategy for dealing with commemorations? These questions were subsequently addressed by an invited panel and considered at a plenary session. Chaired by Dr Daire Keogh, the panel comprised Paul Bracey (University of Northampton), Carmel Gallagher (UU/QUB), Mike Cronin (Boston College) and Brian Crowley (Pearse Museum).

### **Outcomes**

The symposium was a resounding success. There was broad agreement that the approaching centenaries required a coherent response from the education sector. This would demand openness and sensitivity, but also a willingness to tackle difficult and controversial issues head on. A recurrent theme was the need to avoid the assumption that there could or should ever be a consensus on difficult issues: history was as likely to divide as to unite. Students should be allowed to study the nature of historical interpretation and the multiple roles of commemoration.

The symposium was intended as the first phase of a longer-term project. It is hoped that it will inform theory and practice in history education in initial teacher education and, ultimately, in schools. The symposium has given a significant impetus to the development of a major North-South research project on teaching 1916 and the Battle of the Somme. This will be an interdisciplinary project involving education and history. It is also planned to publish a collection of essays which will pick up the issues arising and explore them further.



## SPIRITUAL EDUCATION: NEW CHALLENGE, NEW OPPORTUNITY

**Dr Anne O’Gara, Marino Institute of Education, Dublin**

**Dr Bernadette Flanagan, Marino Institute of Education, Dublin**

**Mr James Nelson, Stranmillis University College, Belfast**

### **Overview and Rationale**

The impetus for this collaborative research project on spirituality in education grew out of a desire by those involved to explore inclusive approaches to spiritual education in Ireland, North and South. Aware of the increasing religious and cultural diversity of young people on the island of Ireland and the challenges this has raised for religious education in particular, it was felt that there would be a benefit in investigating specific methods and pedagogical practices used to encourage spiritual development in young people, whatever their religious or non-religious worldview.

Alexander and McLaughlin (2003) speak of two types of spiritual education: that which is ‘tethered’ to a particular denomination or religion and that which is ‘untethered’. Spirituality which is religiously tethered has a particular framework of belief, practice and value and is aimed at the search for ‘purpose’ and ‘truth’ conceived in rather specific ways (as in the search for what is ‘ultimate’ or ‘sacred’) (p359). Alternatively, untethered spiritual education “can proceed from little more than an apprehension that there is something more to life than is apparent on its surface, and can be radically unstructured and open-ended” (p359). What this simple dichotomy denotes is that spiritual education can be both inside and outside religion.

To take this a step further, as some such as Hay (2006) have done, is to affirm that spirituality is an intrinsic part of the human person. This anthropological approach stresses that teaching about spirituality does not necessarily start from the theological categories of a religious system, or even from the historical expressions of the spiritual quest (though they may be manifest in both), but rather from the capacity for spirituality in every individual. This inclusive approach opens up the teaching of spirituality to cross-cultural and inter-religious contexts, as has been shown by Hammond (1999), Hay and Nye (2006), West-Burnham and Huws-Jones (2007) and Johnson and Neagley (2011). Johnson’s (1999) study of the multiple ways in which educators define spirituality and apply it in their classrooms resulted in eight overlapping categories of definitions, including contemplative (or mystical), religious, meaning-making, self-reflective, emotional, ethical, ecological and creative. In contexts which were focused less on the ‘religious’ category she noted that developing and employing ‘tools’ for spiritual education included methods such as sensory awareness exercises, arts experiences, nature based experiences and reflective practices. Thus, it seemed worthwhile to ask what challenges or opportunities an inclusive model of spiritual education employing such tools might create for teachers in classrooms in Ireland, North and South.

Within the context of a small-scale study it would not be possible to investigate a wide range of practices associated with inclusive spiritual education, so the main area chosen for this project was contemplative spirituality. This was identified as a particularly valuable focus for three reasons.



Firstly, because contemplative practices are being increasingly recognised as foundational to young people's wellbeing (Kabat-Zinn 2001) and to building a just and peaceful society (NGO Committee on Spirituality Values and Global Concerns – A Committee of the Conference of NGOs in Consultative Relationship with the United Nations),<sup>11</sup> the project seemed worthy from an anthropological perspective.

Secondly, because of the assertion by some writers that children find it increasingly difficult to make space for reflection and contemplation in their busy lives, the project seemed worthy from a educational / philosophical perspective. Speaking just before his death, the Irish philosopher and poet, John O'Donoghue, observed: "If you look at the educational system and you look at most of the public fora in our culture, there is very little time or attention given to what you could almost call learning the art of inwardness or a pedagogy of interiority" (O'Donoghue, 2007).

Thirdly, the exponentially expanding educational publications on a wide range of specific and diverse methods in contemplative curriculum and pedagogy, now also commonly referred to as 'mindfulness' education (e.g. Greenland, 2010, Macdonald and Shirley, 2009, Shoeberlein, 2009 and Willard, 2010), merit review and evaluation in an Irish context. These approaches tend to emphasize expanding student capacities for focussed attention; acute sensory awareness; engagement with nature; attunement to internal rhythms; sensing and calming internal stress; emotional regulation skills; and self-reflective and meditative thinking (Johnson and Neagley, 2011).

For these reasons the core research question in our work became: 'What challenges and opportunities are there for spiritual development using contemplative practices such as sensory awareness exercises, arts experiences, nature based experiences, reflective practices or mindfulness meditation in educational settings in Ireland, North and South?'

In recognition of Watson and Thompson's (2007) observation that the most crucial component of any programme of spiritual or religious education is the teacher, we decided to explore our question through the practice of a small number of teachers who were interested in receiving training in spiritual education as well as introducing components of it into their practice. It was also acknowledged that, in order to explore this question, we would benefit greatly from the expertise of others already well-established in this field, and so the aims and activities of the project were framed as follows:

**The aims of the project were:**

1. To transfer knowledge from international researchers regarding the increased competency in focusing attention, the improved maintenance of emotional balance and the enriched resilience in the face of life's challenges for children / young people who experience spiritual education.
2. To familiarise educators with contemplative practices that may provide a simple way to support the development of core emotional and social competencies that underlie successful learning and help students and teachers excel.
3. To introduce educators to an expert educator practitioner in the field of contemplative practices for children/young people.

<sup>11</sup>See <http://www.csvgc-ny.org/>



4. To explore an inter-spiritual approach to intercultural and interfaith education in a North-South context.

**The main activities of the project were:**

1. To hold a training event for 12 teachers, from North and South of Ireland and from both Primary and Post-Primary sectors, led by an international expert in spiritual education. (Details of this event are provided on the website below.)
2. To create an online repository of spiritual education materials for teachers using the Moodle VLE.
3. To encourage an evaluative and reflective approach to the practise of spiritual education through the provision of a structured learning journal.
4. To use the learning journals as a data source for qualitative research into the challenges and opportunities for contemplative spiritual education in schools in Ireland, North and South.
5. To publish the results of this data in a peer-reviewed journal.

For full report go to <http://scotens.org/wp-content/uploads/Final-Report2.pdf>

## WRITING AS A PROFESSIONAL DEVELOPMENT ACTIVITY IN INITIAL TEACHER EDUCATION

**Dr Rose Dolan, NUI Maynooth**  
**Dr Judith Harford, University College Dublin**  
**Dr Billy McClune, Queen's University Belfast**

When a second level teacher becomes a supervisor of school-based experience on an Initial Teacher Education programme (ITEP), they bring their experience as a teacher to bear on their new practice. Through reflection on their own teaching experiences, they offer to the student teacher those nuggets of advice that help the student teacher to develop their craft. As yet, no formal programmes or strategies exist within the Republic of Ireland or Northern Ireland that assist these supervisors in studying their own practices, both as teachers and as teacher educators, and articulating this craft knowledge. There is, however, an international trend towards self-study of teacher education practice (S-STEP), where teacher educators are encouraged to both reflect upon and publish about their practices.

This research project aims to introduce professional writing as a professional development activity for a small group of supervisors of teaching practice in three education schools/ departments, two in the Republic and one in Northern Ireland.

Knowles and Cole (1995) depict professional writing as “an integral part of our professional practice” (p. 71) and describe their transition from classroom teachers to university faculty members as follows:

*With years of teaching experience behind us, we entered the professoriate with considerable confidence in our abilities to carry out our teaching responsibilities; however, we did not feel sufficiently prepared to adopt a writing persona easily... Whereas teaching was so embedded in our professional identities that it seemed to come naturally, writing for publication was something with which we had little experience... Unlike practices associated with beginning to teach – where my actions were transitory and ephemeral, and my mistakes could be blotted out in my mind – writing has a sense of permanency about it that sometimes renders me wordless. (p.73)*

Over the course of the academic year 2011- 2012, two groups were formed for the purpose of exploring the role of writing as a professional development activity. The NUI Maynooth group comprised four part-time university staff who are supervisors of school placement, while the group in Queen's University Belfast were teachers in schools who also worked as school-based tutors with teachers completing Initial Teacher Education and early professional development. Rose Dolan facilitated the NUIM group and Billy Mc Clune facilitated the group from Queen's University. Dr. Judith Harford (UCD) acted as a critical friend to the process.

These groups followed the same programme of activities over the course of the year. These were designed to engage the participants in reading and writing about their practices as teacher educators and to share their writing with one another. A number of meetings were held between November 2011 and June 2012. Prior to each meeting, participants were invited to write 500-1000 words on a particular topic and to bring this to the meeting. The structure of each meeting was as follows:



1. Each participant shared his/her writing with the group, either by distributing a photocopy of the piece or by reading it aloud.
2. The written pieces were discussed, with participants invited to comment on similarities and differences between them.
3. Following the discussion, the key points were summarised and noted. This formed the basis of the report of the meeting.
4. The meeting concluded by setting the focus for the next month.

Some meetings were audio recorded with the permission of the participants and, following the meeting, a participant undertook to write the report and circulate it to the members of the group.

The writing themes included:

1. Journaling about the everyday practices of supervising school placement;
2. Engaging in conversation about practice with a critical friend who does not work in teacher education;
3. Writing one's thoughts on one's autobiography as a learner;
4. Critical incidents as a school placement tutor / supervisor;
5. Writing a case study of an incident.

Participants were also provided with a selection of readings that related to the emergent themes from the written pieces. A selection of these is included in the bibliography. After the series of meetings were completed, participants were invited to evaluate their involvement in the process to date. The groups from NUIM and QUB will meet in September 2012 to share the results of their engagement in the process.

While the process has not yet concluded, initial findings indicate:

1. The benefits of journal keeping as a way of increasing one's self-realisation. This activity, which continued throughout the academic year, allowed participants to identify preconceived notions or assumptions about students and schools.
2. The significance of the study group culture as a motivational factor for critical reflection.
3. That the process assisted the participants in increasing a sense of interconnectedness with the ITE programme and thus reducing the sense of isolation that had developed in the supervision role.
4. That the process was instrumental in causing supervisors to change their practices. One supervisor described adopting a more analytical approach to observation, resulting in feedback to the student that was more measured and focused.

The one-day conference has been postponed until October in order to give the two groups an opportunity to engage with one another in advance of presenting together. One final unexpected outcome is the expressed wish of the supervisors to continue with the process next year and to include more colleagues in the process.

## References

Brookfield, S. (1995). *Becoming a Critically Reflective Teacher*. San Francisco: Jossey-Bass

Knowles, J.G. and Cole, A.L. (1995). Teacher Educators Reflecting on Writing in Practice in Russell, T and Korthagen, F. (1995). *Teachers who teach Teachers; Reflections on Teacher Education* London: Falmer Press

Labaree, D. (2000). On the Nature of Teaching and Teacher Education: Difficult Practices that Look Easy. *Journal of Teacher Education* 51 (3) 228 – 233.

Loughran, J. (2002). Effective Reflective Practice: In Search of Meaning in Learning about Teaching. *Journal of Teacher Education* 53 (1) 33 – 43.

Shulman, L. (1986). Those Who Understand: Knowledge Growth in Teaching *Educational Researcher* 15 (2) 4 -14.

Shulman, L. (2005). Signature pedagogies in the professions, *Daedalus* 134 (3) 52–59.

Walsh, B and Dolan, R. (2009). *A Guide to Teaching Practice in Ireland*, Dublin: Gill and MacMillan.

**PROMOTING  
LITERACY &  
NUMERACY**

THROUGH TEACHER EDUCATION





# **New research and sectoral conference projects**



**Funded or co-funded by SCoTENS 2012-2013**



## DEVELOPING EFFECTIVE MENTOR PEDAGOGIES TO SUPPORT PRE-SERVICE TEACHERS ON TEACHING PRACTICE

**Dr Fiona Chambers, University College Cork**  
**Mr Walter Bleakley, University of Ulster, Jordanstown**  
**Professor Kathleen Armour, University of Birmingham**

### **This project will**

1. Draw on existing research and the findings of the previous SCoTENS funded scoping study on mentoring.
2. Investigate how mentors and student teachers view the features of effective mentor pedagogies and the possibilities for new and innovative ways of conceptualising mentoring.
3. Investigate what would innovative mentor pedagogies look like and what would be the implications for the training of teacher mentors in physical education teacher education (PETE) and the wider education community.
4. To prepare a Charter of New Mentor Competencies to stimulate and inform academic and practitioner debate on the development of innovative mentor pedagogies in PETE and the wider field of teacher education.

**SCoTENS grant awarded £4,500**

## EARLY NUMBER CONCEPTS: KEY VOCABULARY AND SUPPORTING STRATEGIES

**Dr Ann Marie Casserly, St. Angela's College, Sligo**  
**Dr Bairbre Tiernan, St. Angela's College, Sligo**  
**Dr Pamela Moffett, Stranmillis University College**

### **This project will**

- Investigate what is the core vocabulary children require to understand, communicate and apply early number concepts.
- Examine what approaches/strategies could assist teachers in their planning and teaching of the language of early number.

**SCoTENS grant awarded £4,500**

## MANAGING EARLY YEARS INCLUSIVE TRANSITION PRACTICES

**Dr Colette Gray, Stranmillis University College**  
**Dr Anita Prunty, St Patrick's College, Drumcondra**  
**Dr Anna Logan, St Patrick's College, Drumcondra**  
**Dr Geraldine Hayes, St Patrick's College, Drumcondra**

### **This project will**

Compare the transition policies and practices employed by mainstream schools for young children with Special Educational Needs in the North and South of Ireland. Specifically, the project aims to document the policies (at government, local authority and school level) that direct and influence the transition process; explore the differing practices and strategies employed by schools to support the transition process in both jurisdictions; establish how teachers interpret these policies at classroom level; identify the factors that support or impede successful transitions; and identify the importance of parental involvement in the transition process and the role of other agencies.

**SCoTENS grant awarded £5,000**

## A CROSS BORDER CONFERENCE FOR PROMOTING DOCTORAL RESEARCH IN EDUCATION – EXPANDING THE HORIZONS OF DOCTORAL RESEARCH IN EDUCATION: COMPARING, ADAPTING, ADVANCING

**Dr Patrick Walsh, Queen's University Belfast**  
**Dr Dympna Devine, University College Dublin**

This project will organise an all-Ireland conference in the School of Education, Queen's University Belfast, for doctoral students in education.

**SCoTENS grant awarded £3,000**



## NUNS IN EDUCATION, NORTH AND SOUTH: HISTORICAL SOURCES AND INTERPRETATIONS ON SACRED HEART CONVENT SCHOOLS

**Dr Deirdre Raftery, University College Dublin**  
**Dr Micheál Mairtín, St. Mary's University College, Belfast**

This project will collect relevant archival data and translate the data from 19th century idiomatic French into English; integrate it into a permanent exhibition; archive the translations in the Religious of the Sacred Heart of Jesus (RSCJ) archives; conserve the data digitally for future research on women in education, and use data in academic publications.

**SCoTENS grant awarded £3,000**

## CYBER-BULLYING AND THE LAW: WHAT SCHOOLS KNOW AND WHAT THEY REALLY NEED TO KNOW

**Dr Noel Purdy, Stranmillis University College, Belfast**  
**Dr Conor McGuckin, Trinity College Dublin**

This project will provide clear guidance to schools on their legal responsibilities regarding cyber-bullying through the publication and dissemination of a teacher-friendly pamphlet, and thus increase knowledge and confidence regarding cyber-bullying and the legal remedies available for this phenomenon.

**SCoTENS grant awarded £4,000**

## THRESHOLD CONCEPTS IN LANGUAGE TEACHER EDUCATION

**Dr Anne Devitt, Trinity College Dublin**  
**Dr Eugene McKendry, Queen's University Belfast**

This project will identify key concepts for initial language teacher education and the conditions that facilitate learning of these concepts. The project aims to incorporate both the student teacher voice and the voice of professionals in the field.

**SCoTENS grant awarded £4,000**

## THE CREATIVE EDUCATION INFRASTRUCTURE OF IRELAND

**Dr Patrick Collins, NUI Galway**

**Professor Nola Hewitt-Dundas, Queen's University Belfast**

This project will map the third level education infrastructure of the island of Ireland in an effort to gauge its preparedness to exploit creative economy growth. The particular focus will rest on courses and qualification geared at future creative industry workers.

The primary goal of this project is to map the Irish education system's ability to match the growth of the creative industries, attract them to these shores, and encourage indigenous creative industries through the provision of a dynamic creative workforce with internationally recognised qualifications.

**SCoTENS grant awarded £3,000**

# PROMOTING LITERACY & NUMERACY

THROUGH TEACHER EDUCATION





# **Summary of SCoTENS**

**research projects, conferences  
and publications**



**2003-2012**



## RESEARCH AND CONFERENCE PROJECTS FUNDED IN THE AREAS OF SPECIAL EDUCATION AND INCLUSION

No	Title	Date	Author/ Organiser Project leaders	Institutions
1	Special Education Needs and Initial Teacher Education in Ireland	2003-2004	Mr Hugh Kearns  Dr Michael Shevlin	Stranmillis University College, Belfast Trinity College Dublin
2	Preliminary evaluation of a teaching package for children with Profound and Multiple Learning Difficulties	2003-2004	Dr Jean Ware  Dr Colette Gray	St Patrick's College Drumcondra Stranmillis University College
3	Together Towards Inclusion: a toolkit for trainers (1)	2004-2005	Ms Mary Yarr  Ms Barbara Simpson Prof. David Little	Southern Education & Library Board Trinity College Dublin Trinity College Dublin
4	Teacher Education for Special Educational Needs in the North and South of Ireland	2005-2006	Mr Hugh Kearns  Dr Michael Shevlin	Stranmillis University College Trinity College Dublin
5	Together Towards Inclusion: a toolkit for trainers (2)	2005-2006	Ms Mary Yarr  Ms Barbara Simpson Prof. David Little	Southern Education & Library Board Trinity College Dublin Trinity College Dublin
6	The Professional Development Needs of teachers working in Special Educational Needs	2007-2008	Ms Elizabeth O'Gorman Ms Mairin Barry Professor Sheelagh Drudy Ms Eileen Winter Dr Ron Smith	University College Dublin University College Dublin University College Dublin Queen's University Belfast Queen's University Belfast
7	Consulting pupils on the assessment and remediation of their Specific Literacy Difficulties	2008-2009	Ms Louise Long  Dr Michael Shevlin	St Mary's University College, Belfast Trinity College Dublin

8	Student Teachers' perceptions of their competence to meet the needs of pupils with Autistic Spectrum Disorder in mainstream primary schools	2008-2009	Ms Mary Greenwood Dr Patricia Daly  Ms Anne O'Byrne	St Mary's University College Mary Immaculate College, Limerick Mary Immaculate College
9	Facing Autism Ireland Conference	2009-2010	Dr Karola Dillenburger Dr Geraldine Leader	Queen's University Belfast NUI Galway
10	Conference: Dyslexia, Literacy and Inclusion	2009-2010	Ms Louise Long Dr Therese McPhillips	St Mary's University College St Patrick's College, Drumcondra
11	Development of North/South cast studies identifying key features of good practice in the teaching of pupils from ethnic minorities	2009-2010	Mr Ken Wylie  Dr Mark Morgan	Stranmillis University College St Patrick's College, Drumcondra

**RESEARCH AND CONFERENCE PROJECTS FUNDED IN THE AREA OF CITIZENSHIP AND DIVERSITY**

No	Title	Date	Author/ Organiser Project leaders	Institutions
12	North/South Conference on Education for Diversity and Citizenship (1)	2003-2004	Ms Una O'Connor Mr Gerry Jeffers	University of Ulster NUI Maynooth
13	North/South Conference on Education for Diversity and Citizenship (2)	2005-2006	Ms Una O'Connor Mr Gerry Jeffers  Dr Colette Gray	University of Ulster NUI Maynooth
14	Bringing School Communities together to promote education for diversity	2007-2007	Dr Ron Smith  Prof. Keith Sullivan	Queen's University Belfast NUI Galway
15	Inclusion and Diversity Service post primary initiative	2008-2009	Ms Mary Yarr Ms Barbara Simpson	NEELB Trinity College Dublin



**RESEARCH AND CONFERENCE PROJECTS FUNDED IN THE AREA OF TECHNOLOGY AND MATHS**

No	Title	Date	Author/ Organiser Project leaders	Institutions
16	Current Practice in ICT within teacher education	2005-2006	Dr Roger S P Austin Ms Deirdre Graffin Dr Paul Conway Dr Joe O'Hara	University of Ulster University of Ulster University College Cork Dublin City University
17	Digital Video as a tool for changing ICT learning in schools and teacher education	2006-2007	Dr Roger S P Austin Ms Deirdre Graffin Dr Paul Conway Dr Joe O'Hara Dr Linda Clarke	University of Ulster University of Ulster University College Cork Dublin City University University of Ulster
18	Measuring the value of Education Technologies in Ireland North and South (MVET – Ireland)	2008-2009	Dr Conor Galvin Prof John Gardner	University College Dublin Queen's University Belfast
19	A cross-border comparison of student teachers' identities relating to Mathematics	2008-2009	Dr Patricia T Eaton Dr Maurice O'Reilly	Stranmillis University College St Patrick's College, Drumcondra
20	Evaluation of the implementation of Realistic Mathematics Education (RME) within primary schools in the North and South of Ireland	2010-2011	Dr Pamela Moffett Dr Dolores Corcoran	Stranmillis University College St Patrick's College, Drumcondra
21	An exploration of mathematical identity using narrative as a tool (MINT)	2011-2012	Dr Maurice O'Reilly Dr Patricia Eaton	St Patrick's College, Drumcondra Stranmillis University College
22	Early number concepts: Key vocabulary and supporting strategies	2012-2013	Dr Ann Marie Casserly Dr Bairbre Tiernan Dr Pamela Moffet	St Angela's College, Sligo St Angela's College, Sligo Stranmillis University College

**RESEARCH AND CONFERENCE PROJECTS FUNDED IN THE PEDAGOGY OF SCIENCE, HISTORY AND GEOGRAPHY**

No	Title	Date	Author/ Organiser Project leaders	Institutions
23	All-Ireland survey of student perceptions of History, Geography and Science (1)	2004-2005	Dr Colette Murphy Ms Fionnuala Waldron	Queen's University Belfast St Patrick's College, Drumcondra
24	All-Ireland survey of student perceptions of History, Geography and Science (2)	2005-2006	Dr Colette Murphy Ms Fionnuala Waldron Dr Janet Varley	Queen's University Belfast St Patrick's College, Drumcondra St Patrick's College, Drumcondra
25	All-Ireland survey of student perceptions of History, Geography and Science (3)	2006-2007	Ms Susan Pike  Mr Richard Greenwood	St Patrick's College, Drumcondra Stranmillis University College
26	Conference on findings of all-Ireland survey of student perceptions of History, Geography and Science	2008-2009	Ms Colette Murphy Mr Neil O'Conaill Ms Susan Pike	Queen's University Belfast Mary Immaculate College St Patrick's College, Drumcondra
27	Teaching controversial history: a symposium on the teaching of 1916 and the Battle of the Somme	2010-2011	Dr Fionnuala Waldron Dr Pauric Travers  Dr Alan McCully	St Patrick's College, Drumcondra St Patrick's College, Drumcondra University of Ulster
28	Science enhancement and learning through exchange and collaboration among teachers (SELECT)	2011-2012	Dr John McCullagh Dr Colette Murphy Dr Cliona Murphy Mr Greg Smith	Stranmillis University College Queen's University Belfast St Patrick's College, Drumcondra St Patrick's College, Drumcondra



RESEARCH AND CONFERENCE PROJECTS FUNDED IN THE AREA OF TEACHER EDUCATION				
No	Title	Date	Author/ Organiser Project leaders	Institutions
29	North/South Directors of Teaching Practice Study Group	2004-2005	Mr Paraig Cannon Ms Sandra McWilliams Ms Margaret Farrar	Coláiste Mhuire, Marino Stranmillis University College Church of Ireland College of Education, Dublin
30	Diversity in Early Years Education North and South: Implications for teacher education	2005-2006	Dr Barbara McConnell Dr Philomena Donnelly Ms Louise Quinn	Stranmillis University College St Patrick's College, Drumcondra Stranmillis University College
31	North-South Conference on initial teacher education: The Competences Approach to Teacher Professional Development	2005-2006	Mr Barry Burgess Dr Andy Burke  Ms Claire Connolly Ms Rose Dolan	University of Ulster  St Patrick's College, Drumcondra St Mary's University College NUI Maynooth
32	Developing Reflective Skills in Student Teachers	2006-2007	Dr Gerry MacRuaric Dr Juidith Harford Mr Dermot MacCartan	University College Dublin University College Dublin St Mary's University College
33	Cross border exploration of CPD needs of heads of year in a sample of comprehensive and integrated schools	2006-2007	Mr Patrick McNamara Prof. Tom Geary Ms Caryl Sibbett	University of Limerick  University of Limerick Queen's University Belfast
34	School based work in the North and South of Ireland: a review of policy and practice	2006-2007	Dr Brian Cummins Ms Bernadette Ni Aingléis	Stranmillis University College St Patrick's College, Drumcondra



35	A study of work based learning models and partnerships in support of post-compulsory programmes of teacher education	2008-2009	Prof. Gerry McAleavey Mrs Celia O'Hagan Mr Walter Bleakley Ms Sylvia Alexander Mr Harry McCarry Dr Ted Fleming	University of Ulster  University of Ulster University of Ulster University of Ulster  Belfast Metropolitan College NUI Maynooth
36	Peer Mentoring in post-compulsory teacher education	2009-2010	Ms Celia O'Hagan Dr Ted Fleming	University of Ulster  NUI Maynooth
37	Directors of Teaching Practice research group for CPD for teacher practice supervisors	2010-2011	Ms Claire Connolly Mr Séamie Ó Néill	St Mary's University College Froebel College of Education
38	Comparative study into further education North and South: towards a framework for FE teaching qualifications	2010-2011	Mrs Celia O'Hagan Prof. Gerry McAleavey Ms Violet Toland Dr Jennifer Cornyn Dr Ted Fleming	University of Ulster  University of Ulster University of Ulster University of Ulster NUI Maynooth
39	Understanding the potential for capacity-building in Initial Teacher Education programmes. North and South: a baseline comparative study, Phase 1	2010-2011	Dr Jim Gleeson Dr Ruth Leitch  Dr Ciaran Sugrue	University of Limerick Queen's University Belfast  Cambridge University
40	Assessment in teacher education north and south (ATENS)	2011-2012	Dr Tracey Connelly Dr Geraldine Magennis	University College Cork St Mary's University College
41	Teachers' views on the factors influencing their professional development: perceptions, experiences and motivation	2011-2012	Dr Helen O'Sullivan Dr Barbara McConnell Dr Dorothy McMillan	Trinity College Dublin  Stranmillis University College Stranmillis University College



42	Developing effective mentor pedagogies to support pre-service teachers on teaching practice	2012-2013	Ms Fiona Chambers Mr Walter Bleakley Prof Kathleen Armour	University College Cork University of Ulster  University of Birmingham
43	Managing early years inclusive transition practice	2012-2013	Dr Colette Gray  Ms Anita Prunty  Dr Anna Logan  Dr Geraldine Hayes	Stranmillis University College St Patrick's College, Drumcondra St Patrick's College, Drumcondra St Patrick's College, Drumcondra

## RESEARCH AND CONFERENCE PROJECTS FUNDED IN THE AREA OF LANGUAGE LEARNING

No	Title	Date	Author/ Organiser Project leaders	Institutions
44	English as an Additional Language in undergraduate teacher education programme in Ireland	2008-2009	Mr Frank Quinn  Mr Martin Hagan Dr Anne Ryan	St Mary's University College St Mary's University College Marino Institute of Education, Dublin
45	North-South Language Educators Conference	2008-2009	Dr Eugene McKendry Mr Patrick Farren	Queen's University Belfast NUI Galway
46	The spoken Irish of pupils in Irish-Medium Schools	2009-2010	Mr Pádraig Ó Duibhir Ms Jill Garland	St Patrick's College, Drumcondra St Mary's University College
47	Lift off Literacy programme for the Irish-Medium School	2009-2010	Dr Gabrielle Nig Uidhir Sr Elizabeth Connolly	St Mary's University College Monaghan Education Centre
48	Threshold concepts in language teacher education	2012-2013	Dr Anne Devitt Dr Eugene McKendry	Trinity College Dublin Queen's University Belfast

RESEARCH AND CONFERENCE PROJECTS FUNDED IN OTHER AREAS				
No	Title	Date	Author/ Organiser Project leaders	Institutions
49	Art and Science in Education: Moving towards creativity	2006-2007	Mr Ivor Hickey  Ms Deirdre Robson Mr Donal O'Donaghue	St Mary's University College St Mary's University College Mary Immaculate College
50	St Mary's University College St Mary's University College Mary Immaculate College	2006-2007	Dr V McCauley Dr C Domegan Dr Kevin Davison Dr Sally Montgomery Ms Eileen Martin Ms Emma McKenna Dr Billy McClure  Dr Ruth Jarman	NUI Galway NUI Galway NUI Galway  W5 Interactive Discovery Belfast Queen's University Belfast Queen's University Belfast Queen's University Belfast Queen's University Belfast
51	Social Justice Education in Initial Teacher Education: a cross border perspective	2006-2007	Dr Marie Clarke  Dr Audrey Bryan  Prof Tony Gallagher Dr Margaret Reynolds Dr Ken Wylie	University College Dublin University College Dublin Queen's University Belfast St Mary's University College Stranmillis University College
52	Investigation into the experiences of primary school teachers with regard to their teaching of healthy eating guidelines within the curriculum	2008-2009	Ms Elaine Mooney Ms Eileen Kelly-Blakeney Ms Amanda McCloat Ms Dorothy Black	St Angela's College, Sligo St Angela's College, Sligo St Angela's College, Sligo University of Ulster
53	Building North-South links in whole college initiatives in global justice education	2008-2009	Mr Brian Ruane  Dr Gerard McCann	St Patrick's College, Drumcondra St Mary's University College



54	Contribution of Primary School Physical Education to health enhancing physical activity	2009-2010	Dr David McKee Dr Elaine Murtagh	Stranmillis University College Mary Immaculate College, Limerick
55	Developing all-Ireland research capacity in Arts-based Educational Research	2009-2010	Dr Ruth Leitch Ms Shelley Tracey Ms Caryl Sibbett Dr Mary Shine Thompson	Queen's University Belfast Queen's University Belfast Queen's University Belfast St Patrick's College Drumcondra
56	Digitisation of three volumes of Irish Education Documents	2009-2010	Prof Áine Hyland Prof Tony Gallagher	Church of Ireland College of Education, Dublin Queen's University Belfast
57	Sixth form/sixth year religion in Northern Ireland and Republic of Ireland	2009-2010	Dr Andrew McGrady Dr Christopher Lewis	Mater Dei Institute of Education University of Ulster
58	Disablist Bullying: an investigation into teachers' knowledge and confidence	2010-2011	Dr Noel Purdy Dr Conor McGuckin	Stranmillis University College Trinity College Dublin
59	Images and Identity (collaborative art and design education project within teacher education)	2010-2011	Ms Dervil Jordan Dr Jacqueline Lambe	National College of Art and Design University of Ulster
60	Effective Mentoring within Physical Education Teacher Education	2010-2011	Dr Fiona Chambers Mr Walter Bleakley	University College Cork University of Ulster
61	Exploring Japanese Research Lesson Study (RLS) as a model of peer to peer professional learning	2010-2011	Prof John Gardner Mr Gerard Devlin Dr Debie Galanouli Dr Mary Magee Ms Kathryn McSweeney	Queen's University Belfast Queen's University Belfast Queen's University Belfast St Angela's College, Sligo St Angela's College, Sligo

62	Children exposed to Domestic Abuse: helping student teachers understand their role in a primary school setting	2010-2011	Dr Bronagh McKee Dr Stephanie Holt	Stranmillis University College Trinity College Dublin
63	Exploring and developing spaces among adult education practitioners for online and arts based reflection	2011-2012	Ms Shelley Tracey Mr Jim Mullan  Ms Irene Bell  Ms Geraldine Mernagh Ms Margaret McBrien	Queen's University Belfast Queen's University Belfast Stranmillis University College Waterford IT  Waterford IT
64	A critical analysis of North-South educational partnerships in development contexts	2011-2012	Prof Peadar Cremin Prof Peter B Finn	Mary Immaculate College St Mary's University College
65	Spiritual education: new challenge, new opportunity	2011-2012	Dr Anne O'Gara  Dr Bernadette Flanagan Mr James Nelson	Marino Institute of Education, Dublin Marino Institute of Education Stranmillis University College
66	Writing as a professional development activity in ITE	2011-2012	Ms Rose Dolan Dr Judith Harford Mr Billy McClune	NUI Maynooth University College Dublin Queen's University Belfast
67	Nuns in education, North and South: historical sources and interpretations on Sacred Heart convent schools	2012-2013	Dr Deirdre Raftery Dr Michéal Mairtín	University College Dublin St Mary's University College
68	Cyber-bullying and the law: What schools know and what they really need to know	2012-2013	Dr Noel Purdy  Dr Conor McGuckin	Stranmillis University College Trinity College Dublin
69	The creative education infrastructure of Ireland	2012-2013	Dr Patrick Collins Prof. Nola Hewitt-Dundas	NUI Galway  Queen's University Belfast



PROMOTION AND DISSEMINATION OF RESEARCH				
No	Title	Date	Author/ Organiser Project leaders	Institutions
70	Irish Association of Social Scientific and Environmental Education (IASSEE) Conference (1)	2003-2004	Dr Janet Varley  Dr Colette Murphy	St Patrick's College, Drumcondra Queen's University Belfast
71	Educational Studies of Ireland(ESAI)/British Education Research Association (BERA) joint conference (1)	2004-2005	Mr Denis Bates Prof John Gardner	University of Limerick Queen's University Belfast
72	IASSEE Conference (2)	2004-2005	Dr Janet Varley  Dr Colette Murphy	St Patrick's College, Drumcondra Queen's University Belfast
73	ESAI and BERA joint conference (2)	2005-2006	Dr Anne Lodge Prof John Gardner	NUI Maynooth Queen's University Belfast
74	Doctoral Research in Education North and South conference – links, challenges and opportunities (1)	2008-2009	Dr Dymphna Devine Prof Jeanette Ellwood	University College Dublin Queen's University Belfast
75	Doctoral Research in Education North and South conference – links, challenges and opportunities (2)	2009-2010	Dr Caitlin Donnelly Dr Dymphna Devine	Queen's University Belfast University College Dublin
76	Cross-border conference on Integration of Academic and Personal Learning in Post-Primary Religious Education	2010-2011	Mr Vincent Murray Mr Norman Richardson	St Angela's College, Sligo Stranmillis University College
77	Doctoral Research in Education North and South conference – links, challenges and opportunities (3)	2010-2011	Dr Caitlin Donnelly Dr Dymphna Devine	Queen's University Belfast University College Dublin



78	Cross Border Conference for Promoting Doctoral Research in Education: Expanding the horizons of Doctoral Research in Education: Comparing, Adapting, Advancing	2012-2013	Dr Patrick Walsh  Dr Dympna Devine	Queen's University Belfast University College Dublin
----	--	-----------	--	---

### PUBLISHED REPORTS

No	Title	Date	Author and/or editors
1	SCoTENS Annual Report	2003	Andy Pollak and Patricia McAllister
2	SCoTENS Annual Report	2004	Andy Pollak and Patricia McAllister
3	Teacher Education for Citizenship in Diverse Societies: Conference and annual reports	2005	Andy Pollak and Patricia McAllister
4	Teacher Education and Schools: Together towards improvement: Conference and annual reports	2006	Andy Pollak and Patricia McAllister
5	Together Towards Inclusion: Toolkit for Diversity in the Primary School (published out of SCoTENS project by Southern Education and Library Board and Integrate Ireland Language and Training	2007	Mary Yarr, Barbara Simpson and David Little
6	The Competences Approach to Teacher Professional Development: Current Practice and Future Prospects	2007	Rose Dolan and Jim Gleeson
7	Teaching in the Knowledge Society: Conference and annual reports	2007	Andy Pollak and Patricia McAllister
8	Education for Citizenship and Diversity in Irish Contexts (published out of SCoTENS conference report by Institute of Public Administration, Dublin)	2008	Una O'Connor and Gerry Jeffers



No	Title	Date	Author and/or editors
9	A review of Science Outreach Strategies, North and South	2008	Kevin Davison, Veronica McCauley, Christine Domegan, William McClune, Eileen Martin & Emma McKenna, Sally Montgomery
10	School Leadership Policy and Practice, North and South: Conference and annual reports	2008	Andy Pollak and Patricia McAllister
11	Becoming a Teacher: Primary Student Teachers as learners and teachers of History, Geography and Science – an all-Ireland study	2009	Fionnuala Waldron, Susan Pike, Richard Greenwood, Cliona Murphy, Geraldine O'Connor, Anne Dolan, Karen Kerr,
12	Professional Development for Post-Primary Special Education Needs in Northern Ireland and the Republic of Ireland	2009	Elizabeth O'Gorman, Mairín Barry, Sheelagh Drudy, Eileen Winter, Ron Smith
13	Valuing Education Technology in Schools in Ireland, North and South	2010	Conor Galvin, John Anderson, John Gardner, Anne McMorrough, Stephanie Mitchell, Kathryn Moyle
14	Reflective Practice: Challenges for Teacher Education North and South: Conference and Annual Report	2010	Andy Pollak and Patricia McAllister
15	Disablist Bullying: an investigation of student teachers' confidence and knowledge	2011	Noel Purdy, Conor McGuckin
16	An investigation into the experiences of primary school teachers with regard to their teaching of healthy eating guidelines within the curriculum	2011	Elaine Mooney, Eileen Kelly-Blakeney, Amanda Mc Cloat, Dorothy Black
17	Teacher Education for Inclusion: Conference and Annual Report	2011	Andy Pollak and Patricia McAllister

No	Title	Date	Author and/or editors
18	Three reports for the Standing Conference on Teacher Education North and South (SCoTENS) - Exploring Japanese lesson study as a model of peer-to-peer professional learning Effective mentoring within physical education teacher education; Domestic abuse – using arts based education to help student teachers learn about the context and impact on children;	2012	John Gardner, Debie Galanouli, Gerry Devlin, Mary Magee, Kathryn McSweeney, Mary McHenry, Ita McVeigh, Stephanie Mitchell, Fiona Chambers, Sinead Luttrell, Kathleen Armour, Walter Bleakley, Deirdre Brennan, Frank Herold, Bronagh McKee, Steph Holt
19	Promoting Literacy and Numeracy through Teacher Education: Conference and Annual Reports	2012	Patricia McAllister and Andy Pollak

# PROMOTING LITERACY & NUMERACY

THROUGH TEACHER EDUCATION



## SCoTENS Statement of Affairs

Year ended 31st July	2012 £	2011 £	2010 £
<b>SURPLUS FUNDS</b>	28,562.96	56,461.03	103,065.75
<b>at 1st August 2011</b>			
Add back Pledged Funds at that date	72,105.00	78,122.00	66,500.00
	<u>100,667.96</u>	<u>134,583.03</u>	<u>169,565.75</u>
<b>INCOME</b>			
DEL / DE	25,000.00	25,000.00	25,000.00
DES	25,000.00	25,000.00	25,000.00
Conference Fees	9,517.14	10,338.99	13,358.52
SCoTENS Annual Fees	54,205.36	55,066.50	52,377.90
	<u>113,722.50</u>	<u>115,405.49</u>	<u>115,736.42</u>
	214,390.46	249,988.52	285,302.17
<b>EXPENDITURE</b>			
Research Projects	31,061.40	54,096.94	39,569.14
North South Teacher Exchange Project	23,399.89	19,555.31	26,004.48
Conferences and associated costs	17,104.99	21,997.89	26,315.21
Research Publications and associated costs	13,906.40	10,681.37	19,758.48
Mileage	737.84	646.39	844.16
Sundry Expenses	1,180.68	1,089.66	301.17
Evaluation	3,500.00	3,500.00	
CCBS Admin & Professional Services	37,753.00	37,753.00	37,926.50
	<u>128,644.20</u>	<u>149,320.56</u>	<u>150,719.14</u>
	85,746.26	100,667.96	134,583.03
<b>PLEDGED FUNDS</b>			
<b>at 31 July, 2012</b>			
Research Projects	57,849.09	67,605.00	78,122.00
Evaluation	0.00	4,500.00	0.00
	<u>57,849.09</u>	<u>72,105.00</u>	<u>78,122.00</u>
<b>SURPLUS FUNDS</b>	<u>£27,897.17</u>	<u>£28,562.96</u>	<u>£56,461.03</u>
<b>at 31 July 2012</b>			

# PROMOTING LITERACY & NUMERACY

THROUGH TEACHER EDUCATION







# PROMOTING LITERACY & NUMERACY

THROUGH TEACHER EDUCATION



This Journal was designed by

Leslie Stannage Design  
Arbor Building  
71-75 Donegall Pass  
Belfast BT7 1NR

**Tel:** 028 9022 4455

**Email:** [info@l-s-d.com](mailto:info@l-s-d.com)

**Web:** [www.l-s-d.com](http://www.l-s-d.com)

Report published by  
The Centre for Cross Border Studies  
for  
The Standing Conference on Teacher Education North  
and South (SCoTENS)

**Tel:** 028 3751 1550 (048 from Republic of Ireland)

**Email:** [p.mcallister@qub.ac.uk](mailto:p.mcallister@qub.ac.uk)

**Websites:** [www.scotens.org](http://www.scotens.org) and [www.crossborder.ie](http://www.crossborder.ie)